ASPECTS OF LATE HELLADIC SEA TRADE

A Thesis

by

CHRISTOPH BACHHUBER

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

MASTER OF ARTS

December 2003

Major Subject: Anthropology

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ABSTRACT

Aspects of Late Helladic Sea Trade. (December 2003)

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The trade mechanisms joining the Mycenaean Aegean to the greater Levant have intrigued and eluded Bronze Age scholarship since the earliest discoveries of foreign objects in Mycenaean burials. In the past decade, topics of interregional trade in the eastern Mediterranean have enjoyed renewed discussions, inspired in no small part by the excavation of the Uluburun shipwreck. Data generated from the shipwreck is amounting to an extraordinary body of evidence for contact between the Aegean and the Near East. The proposed Mycenaean presence on board the Uluburun ship requires that the sum of evidence and hypotheses for trade between the two regions be re-examined. By attempting to demonstrate the role the Mycenaeans had performed on the last journey of the Uluburun ship, an important mechanism of trade may be revealed between the Aegean and Semitic worlds.

To my parents,

Stephen and Karin Bachhuber

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CHAPTER I

INTRODUCTION

The palaces of the Bronze Age Aegean stood at the edge of the eastern Mediterranean world. Looking east, an expanse of water separated the Minoans and Mycenaeans from the centers of Cyprus, Syro-Palestine and Egypt. Communication between the Aegean and greater Levant was necessarily dependent on seagoing ships. The wealth of Minoan, Cycladic and Mycenaean ship iconography attests to Aegean seafarers,[1] though many aspects of their seafaring culture are poorly understood. Perhaps the greatest barrier to our study of Bronze Age Aegean seafaring is the inaccessibility of the textual evidence. The Minoan script, Linear A, has yet to be deciphered. The Mycenaean script (Linear B) has been notorious for its silence on issues related to seafaring trade and foreign contact.

The range of Minoan seafaring and merchant enterprises can be glimpsed through other sources, namely the texts and iconography of the Egyptians and the texts of the Assyrians (see Chapter IV). The Mycenaeans, on the other hand, have been elusive in

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This thesis follows the style and format of the *American Journal of Archaeology*.

[1] For the most comprehensive study of Minoan, Cycladic and Mycenaean ship iconography see Wachsmann (1998, 87-122; 131-44); see also M. Wedde (2000).

the records of their contemporaries; yet great quantities of Mycenaean pottery have found its way to Cyprus, Syro-Palestine, and Egypt.

Prior to Cline's 1994 publication *Sailing the Wine Dark Sea: International Trade and the Late Bronze Age Aegean*, Bronze Age scholarship had not given Mycenaean-specific mechanisms of trade a serious consideration. This neglect stemmed mostly from the scarcity (or subtlety) of evidence for Mycenaean merchant activity. Consequently, two irreconcilable camps had formed around this seeming void of evidence. Both perspectives have further obscured the Mycenaean end of interregional trade.

The longer established camp has accepted uncritically the existence of a powerful Mycenaean merchant fleet, and even a thalassocracy, to account for the abundance of LH IIIA2-B pottery on Cyprus and in Syro-Palestine and Egypt.[2] In the face of a virtual absence of evidence for Mycenaean merchant activity, the ubiquitous exported pottery was made to support scenarios for a powerful Mycenaean merchant fleet in the eastern Mediterranean. Kantor, writing in 1947, was the first scholar to publish a comprehensive thesis on trade between the Late Bronze Age Aegean and the greater Levant. She remarks, "…only the sailors, merchants, and craftsmen of Mycenaean Greece can justifiably lay claim to the honor of forming the links connecting the Aegean with the Orient."[3]

[2] Kantor 1947, 103; see also Immerwahr 1960, 12; Hankey 1967, 145-7; Stubbings 1972, 61-8; Muhly 1973, 185-6; Courtois and Courtois 1978, 292-363.
[3] Kantor 1947, 103.

It took Bass' excavation and publication of the Late Bronze Age Cape Gelidonya merchantman, which was clearly not Mycenaean, for a scholar to begin emphasizing the scarcity of evidence for Mycenaean merchant activity.[4] A camp had thus formed in opposition to the dominant "hellenocentric" paradigm, and questioned the predominance of Mycenaean merchant activity in the eastern Mediterranean.[5]

The blind faith of the "hellenocentric" camp has done little to improve our knowledge of Mycenaean interregional trade. Likewise, their challengers, particularly Bass and Yannai, have portrayed the Mycenaeans as passive recipients in interregional trade, and have not given Mycenaean-specific trade mechanisms a serious consideration.

Cline, while compiling an extensive database of imported wares in the Late Bronze Age Aegean, was the first scholar to investigate Mycenaean mechanisms of interregional trade. This was published nine years ago, however, and important observations relating to Mycenaean trade have been made since, particularly in the disciplines of Linear B scholarship and nautical archaeology.

Also, Cline's thesis glances over the most formative period of Mycenaean trade, namely LH I-II. Regular contact between the Minoans and Mycenaeans are demonstrated in LH

[4] Bass 1967, 164-8; 1973: 36; 1991, 73-4; 1997, 83-5; 1998, 184-7; 1998, 186-7.
[5] Sasson 1966, 128; see also Yannai 1983, 105-14, Wachsmann 1987, 109-15; 1998, 154-5.

I-II burials. This is also a period when a considerable quantity of non-Aegean objects begins appearing on the Greek mainland. Mycenaean relations with the Minoans may have established trade precedents, which later influenced Mycenaean strategies in the greater eastern Mediterranean.

Mycenaean ceramics do not begin appearing on foreign soil in significant numbers until after the collapse of Minoan civilization. The extent of Mycenaean export is demonstrated in the vast distribution of LH IIIA2-B pottery in the eastern Mediterranean. The mechanism(s) that were delivering these wares, however, remains elusive. A review of the scholarship surrounding merchant activity between the Aegean and greater Levant will be followed by a discussion of the Late Bronze Age Uluburun shipwreck. The ship wrecked off the southern coast of Turkey at the height of Late Helladic export (Figure 1). Aspects of its cargo and personal effects may provide compelling clues to a mechanism of trade that existed between the two regions.

The exchanged objects are themselves powerful indicators of the ebb and flow of Minoan and Mycenaean interregional trade. I will take as a working hypothesis that the identification of non-Aegean wares in the Aegean, as well as the identification of Aegean objects in Egypt, Syro-Palestine and Cyprus are (for the most part) valid barometers for trade between the given regions.[6] This hypothesis must take into

[6] Pulak has made an important observation on the cargo of Cypriot ceramics on the Uluburun ship. Where 68 Cypriot ceramic vessels have been identified in all phases of the Late Bronze Age Aegean (Cline 1994, 60; Pulak 2001, 42), approximately 135 were recovered from the Uluburun shipwreck (Pulak 2001, 40-2). Presuming the Uluburun ship was en route to the Aegean (see infra pp. 101-2), a single cargo of Cypriot

consideration that the bulk of interregional trade was in raw materials and resources that would not have survived in the archaeological record.[7] I therefore recognize the danger in assigning 18 imported pots the ultimate responsibility of defining a trade relationship. If shipwreck investigations have been any indication, however, transshipments of pots are normally found in association with raw materials.[8]

IMPORTED MATERIAL CULTURE

Significant numbers of exotic (non-Aegean) objects do not begin appearing on the Greek mainland until early LH I, which marks the beginning of the Shaft Grave period (to be discussed in greater detail below). Imports to the LH I mainland are restricted almost exclusively to the Mycenae shaft graves. The shaft grave offerings include amber beads from the Baltic,[9] glass beads[10] and gold ornaments[11] from Mesopotamia, Egyptian jars and jugs of faience and alabaster,[12] a Cassite diadem,[13] and an Anatolian rhyton[14] and pin.[15] Exotic (non-Aegean) wares begin to appear in LH II contexts outside of

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ceramics doubles the entire corpus of Cypriot ceramic finds in the Late Bronze Age Aegean (Pulak 2001, 42). Consequently, we can not gauge the magnitude of trade between given regions based on the frequency of foreign object finds. We can however, follow the ebb and flow of trade between regions based on the occurrence (or non-occurrence) of imported objects.

[7] Kantor 1947, 19; see also Bass 1967, 165.

[8] Bass 1967; 1973; 1986; 1991; see also Bass et al. 1989; Pulak 1987; 1988; 1998; 2001.

[9] Renfrew 1972, 467-8

[10] Karo 1930, 69 n. 209b pl. 150.

[11] Higgins 1969, 69.

[12] Warren 1969, 43; see also Pendlebury 1930, 55; Cline 1994, 201, 204, 215.

[13] Erlenmeyer 1965, 177-8.

[14] Bissing, 1923, 106-8.

[15] Müller 1918, 153-64.

Mycenae.[16] Mesopotamian glass beads, a glass plaque and a glass pendant have all been identified at Kakovatos, while a Mesopotamian glass pendant has been identified at LH II Thorikos.[17] LH II Archanes and Argive Heraion have both produced Egyptian bowls. An Egyptian alabastron has also been identified at LH II Argive Heraion.[18] A Syro-Palestinian axe appears at LH II Vapheio,[19] as well as two Egyptian alabastra,[20] an Egyptian amphora,[21] and silver spoon.[22] LH IIB Tsoungiza has produced one Syro-Palestinian amphora.[23] LH IIIA-B imported objects are too numerous to list here. Suffice it to say that imported objects from Anatolia, Cyprus, Syro-Palestine, Mesopotamia and Egypt increase markedly into the LH IIIA period, and continue to increase almost 5 fold to a total of 118 non-Aegean LH IIIB imports.[24] The significance of these import patterns, in light of relations with Crete and the greater eastern Mediterranean, will be discussed below.

EXPORTED MYCENEAN WARES

[16] This overview will not differentiate LH IIA from LH IIB artifacts. Few of the excavation reports and catalogues reviewed in this study differentiated the two sub periods.
[17] Müller 1909, 277-8; see also Cline 1994, 140.
[18] Pendlebury 1930, 59; Cline 1994, 163.
[19] Tsountas 1889, 147, 155-156 pl. 8:1.
[20] Warren 1969, 114; see also Cline 1994, 165.
[21] Pendlebury 1930, 44 n. 72; see also Cline 1994, 179.
[22] Tsountas 1889, 146, 153 pl. VII: 17; see also Cline 1994, 163
[23] Cline 1994, 172.
[24] Cline 1994, 13-5.

Mycenaean pottery may have arrived to Cyprus (Enkomi) as early as LH I (two cup fragments), though these could also represent early LH IIA/LM IB forms.[25] Transitional LH IIB-IIIA1 forms trickled into Enkomi and Arpera.[26] Significant quantities of LH IIIA1 pottery begin appearing in Kourion, Enkomi, Maroni, and Hala Sultan Tekke.[27] The number of sites yielding LH IIIA2 pottery increases substantially.[28] Mycenaean wares reach peak export to Cyprus in the LH IIIB period, with large quantities of LH IIIB wares identified throughout the island.[29] It should be noted that the quantities of LH IIIA-B ceramics on Cyprus far outnumber the quantities identified in Syro-Palestine and Egypt combined.[30]

The earliest possibility for exported Mycenaean material culture to Syro-Palestine is LH IIA, although these may also represent LM IB forms.[31] LH IIA/LM 1B wares have been identified at Bassit, Ugarit, Byblos, Hazor, Tell Ta'annek, Gezer, Amman, Lachish and Tell el-'Ajjul.[32] Purely Mycenaean LH IIB wares begin appearing at Hazor, Beth Shan, and Amman. Kamid el-Loz, Akko, and Gezer have all produced LH IIIA1 wares. The number of Syro-Palestinian sites producing LH IIIA2 wares increases drastically to 22.

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[25] Catling 1964, 36; see also Hankey (1993a, 103) notes LH IIA forms and decorations are difficult to differentiate from contemporary LM IB styles. This will become an important consideration later into the discussion.
[26] Catling 1964, 36.
[27] Stubbings 1951, pls. 6-8.
[28] Catling 1964, 36-8.
[29] Stubbings 1951, pl. 9-13.
[30] Catling 1964, 38.
[31] See supra n. 25.
[32] Hankey 1993a, 105-7. All data for Minoan and Mycenaean ceramic export to Syro-Palestine is summarized in pages 105-107 of Hankey's article.

Mycenaean export to Syro-Palestine reaches its peak in LH IIIB, with 30 sites producing LH IIIB wares.

LH IIA/LM IB pottery in Egypt has been identified at Saqqara, Abydos and Dra' Abu el-Naga'.[33] Saqqara, Memphis, Kahun, Gurob and Qurna have all yielded LH IIB wares. No LH IIIA1 wares have been recovered in Egypt, and 10 sites have produced LH IIIA2 pottery. LH IIIB wares represent the zenith of Mycenaean exports to Egypt, with 11 sites yielding LH IIIB pottery.

In sum, the Mycenaean export economy likely had its origins in the LH IIA period. It seems Mycenaean export experienced moderate growth up to LH IIIA1, and expanded rapidly into LH IIIA2. Peak Mycenaean export in the eastern Mediterranean is evidenced in the LH IIIB period. The Mycenaeans had clearly become prominent players in eastern Mediterranean trade by at least LH IIIA2. The Greek mainland's relationship to Crete in both the pre-palatial and palatial periods is crucial to understanding how the Mycenaeans had become a trading power.

[33] Hankey 1993b, 109-14. All data for Minoan and Mycenaean ceramic export to Egypt is summarized in pages 109-114 of Hankey's article.

CHAPTER II

THE MINOAN PALACE AND MYCENAEAN CHIEFDOM

The polities of the eastern Mediterranean were establishing complex trade and diplomatic relations at least 600 years before the first citadels were erected on the Greek mainland. By dynasties V or VI, Byblos had become the principle entrepot for Egyptian timber.[34] An MB II text from Mari documents Cretan merchants arriving to Ugarit to purchase tin.[35] Old Assyrian texts at Kultepe reveal Assyrian trading colonies in Anatolia.[36] Cypriot copper may have been arriving to Crete as early as EB III.[37] Out of these early contacts arose a formalized code of interregional relations, manifested in the Amarna Letters, which will be discussed below.

Greece's first exposure to the decadence and delights of the eastern Mediterranean is attested in the shaft graves of Mycenae. Emily Vermeule's inventory of exotic items in the shaft graves includes "ostrich eggs from Nubia sent through Egypt and Crete, lapis lazuli from Mesopotamia, alabaster and faience from Crete, raw ivory from Syria, silver from Anatolia, and amber from Prussia brought down the Adriatic or out of Odessa across the north Aegean."[38]

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[34] Wachsmann 1998, 9.
[35] Malamat 1971, 37-8.
[36] Veenhof 1972, xxi.
[37] Stos Gale and Macdonald 1991, 267.
[38] Vermeule 1964, 89.

THE MYCENAEAN CHIEFDOM

The Early Mycenaean period (LH I-II) is characterized by a proliferation of emergent and rival chiefdoms across the Greek mainland. The burial practices of the Helladic chiefdoms, specifically within the tholoi of Messenia and the shaft graves of Mycenae, reveal the social and political fabric of the chiefdom polities, and importantly, suggest contact with foreign entities.

The tholoi of the Messenian chiefdoms were constructed as conspicuous monuments of elite display. The great expenditures of time and resources towards their construction, as well as the high intrinsic or cultural value of their grave goods, simultaneously legitimized the lineage of the ruling chief, while attempting to awe or humble his rivals.[39] The shaft graves of Mycenae quite surpass the tholoi of Messenia in wealth of grave goods, though the architecture is less assuming than their Messenian counterparts.

The high value of a grave good in both the Messenian tholoi and the shaft graves of Mycenae was measured by degrees of its exoticness. The Early Mycenaean burials, particularly the shaft graves of Mycenae, share remarkable parallels to prestige items, both domestic and imported, identified in the Minoan palaces (e.g. the faience work, stone vases, ostrich egg rhytons, and stone seals). [40] The chief's legitimacy was in large

[39] Wright 1995a, 69.
[40] Wright 1995a, 69.

part demonstrated through his association with (or emulation of) the ruling elite of Minoan Crete. It was the chief's exclusive access to these objects that legitimized both his person and position.[41]

The two centers of power on the Early Mycenaean mainland were Mycenae and the chiefdoms of Messenia. Both regions enjoyed contact with the Minoans, though the humble offerings of Messenia's tholoi pale beside the extravagance of the shaft graves. Several considerations may account for the discrepancy between the two.

The tholoi of Messenia (and elsewhere across the mainland) are far more conspicuous landmarks than the shaft graves, and consequently have suffered more extensive looting. Fortunately, seven Early Mycenaean tholos tombs have survived more or less intact, including those at Kazarma, Kokla, Samikon, Pylos Grave Circle, Routsi tomb 2, Peristeria South and Kapakli.[42] The most exceptional offerings in the intact tholoi include, from the Pylos Grave Circle, a gold diadem and several bronzes.[43] The tholos tomb at Peristeria South has produced a type A sword, bronze vessels, and a spindle shaped fillet.[44] A gold leaf diadem, a bronze scale pan, and a bronze cup with a decorated rim have been identified in the Kazarma tholos. Thin strips of gold leaf were

[41] Wright 1995a, 70-1.
[42] Cavanaugh and Mee 1998, 51-2.
[43] Cavanaugh and Mee 1998, 52.
[44] Korres 1983, 145.

buried in the Kapakli tholos.[45] Routsi tholos 2 has produced bronzes including a cauldron/tripod and a Vapheio B cup.[46]

The seven intact (unlooted) LH I-II tholoi provide a wide enough statistical sample to begin drawing conclusions on the wealth of their overall grave offerings. LH I-II tholoi clearly display a significant range of prestige items, though none of the tholoi can compare to the extravagance of the shaft graves.

Cavanagh and Mee have offered another scenario (besides looting), that might account for some of the discrepancy between the shaft graves and the tholoi. They suggest that the sanctioned removal of grave offerings was a regular practice in the Early Mycenaean tholoi. Cavanagh and Mee have identified the scraps of jewelry scattered in the dromos of most of the tholoi, and the impoverished secondary inhumations of the Dendras and Pylos Grave Circle tholoi, as evidence for the sanctioned removal of grave offerings. [47] If, however, the burial offerings (prior to the removal) were of a magnitude comparable to the shaft graves, would all of these extraordinarily valuable objects have simply disappeared from the archaeological record, upon their removal? This is difficult to imagine. It therefore seems highly improbable that the LHI-II Messenian tholoi ever rivaled the shaft graves of Mycenae in wealth of grave offerings.

[45] Cavanaugh and Mee 1998, 51.
[46] Wright 1995a, 80, ta. 1.
[47] Cavanaugh and Mee 1998, 52.

Mycenae clearly exhibited the most wealth, and enjoyed the greatest foreign contact, of the Early Mycenaean chiefdoms. The sudden affluence (and cosmopolitanism) experienced by the Early Mycenaean chiefdoms, particularly Mycenae, has been the focus of much debate and speculation. What was the mode or mechanism of contact between the Early Mycenaeans and the world beyond Greece? Two hypotheses describe Mycenaean mercenaries as the conduits for the wealth in the shaft graves. Persson was the first to speculate the deployment of Mycenaean merceneries in Egypt. [48] Marinatos elaborated on his hypothesis.[49] In this scenario, the shaft graves are contemporary with the end of Hyksos occupation in Egypt. Pharaoh rewarded Mycenaean princes with exotic objects and precious metals for their assistance in expelling the Hyksos. The metals were delivered to the Greek mainland, where Cretan and Helladic craftsman subsequently worked them.

A less elaborate mercenary scenario has been put forward by Wright, who suggests warriors from the mainland may have policed Minoan palatial interests. These mercenaries were then initiated into Minoan court life, and became the conduits for the exotic and elite Minoan objects to the mainland.[50] Perhaps warriors from Mycenae were the most esteemed for their fighting qualities, and were more often recruited by the Minoan palaces.

[48] Persson 1942, 178-96.
[49] Marinatos and Hirmer 1960, 181-2.
[50] Wright 1995b, 29.

Reward for mercenary service presumes objects were acquired in one tour of duty, or within a short period of time. Dickinson (contra Perrson/Marinatos and Wright) observes that the shaft grave objects were accumulated and deposited over several generations, and thus can not represent payment. He favors a hypothesis that joined the Early Mycenaeans and Minoans in trade relations.[51] The Early Mycenaeans, particularly at Mycenae, may have been in possession of a resource (or had access to a resource) that was not as readily available to the Minoans. Let us examine some of the possible resources that might have encouraged the Minoans to initiate trade with the Greeks.

The elite of Mycenae had a predilection for amber, which appears for the first time in the Aegean in the shaft graves.[52] The origin of nearly all Mycenaean amber is the Baltic.[53] Renfrew suggests that amber reaching the Early Mycenaean mainland was arriving via a "prestige chain" of gift exchange that extended from the Baltic to the mainland chiefdoms, particularly Mycenae.[54] Mycenae was therefore in possession of a valuable commodity that was accessed through overland trade.

If the seafaring Minoans wanted amber, they would have accessed it through LH I-II Mycenae. Could this prestige chain have extended to the Cretan palaces? Possibly, though amber has been identified on only 8 sites on EM III-LM IIIB Crete, with only

[51] Dickinson 1977, 48.
[52] Harding and Hughes Brock 1974, 152.
[53] Harding and Hughes Brock 1974, 156.
[54] Renfrew 1972, 467-8.

one positive LM IA provenience.[55] The sparse distribution of amber on Bronze Age Crete hardly accounts for the attention paid to the Mycenaean chiefdoms by the Minoan palaces.

The Baltic amber arriving at Mycenae may have accompanied a much more important raw material, which appears to have few sources in the ancient world. The Early Mycenaeans may have been procuring tin from Bohemia, or even the British Isles. Dickinson sees Early Mycenaean pottery identified in the Adriatic, and further west, as possible indicators of Mycenaean trading enterprise penetrating into Europe.[56] Amber was certainly imported to the LH I-II Greek mainland from this region, while extensive tin deposits have been identified at Erzgebirge (on the border of Germany and the modern day Czech Republic).[57] Further, gold wheels identified in a LH IIIB hoard at Tiryns might substantiate a scenario extending a trade network from Greece into central Europe. The gold wheels share comparanda with contemporary gold ornaments identified at Hradec Kralove in the modern day Czech Republic.[58]

Does the Early Mycenaean pottery identified around the Adriatic suggest a Mycenaean incentive to tap into a trade network, which extended to the tin mines of Bohemia? Muhly does not think so.[59] Evidence for mining activity at Erzgebirge dates no earlier

[55] Harding, and Hughes Brock 1974, 167.
[56] Dickinson 1977, 55, 105.
[57] Muhly 1985, 289.
[58] Harding and Hughes-Brock 1974, 158.
[59] Muhly 1985.

than the 12th century BC.[60] Muhly has long suggested that the Mycenaeans were procuring their tin from the mines of the southern British Isles and Brittany. Evidence for the exploitation of Cornish tin dates to 2000 BC, while the tin sources at Brittany were mined from the Western European Middle Bronze Age onwards (beginning ca. 1800 B.C.[61]).[62] Wessex culture (England) objects appearing in the Bronze Age Aegean, including spacer plates and a gold-mounted amber disk identified near Knossos, offer compelling evidence for Mycenaean procurement of tin from these sources.[63] There is no conclusive evidence for Mycenaean wares in either Brittany or the British Isles, though Muhly notes there is no clear evidence for Mycenaean trade in the Baltic either, which is conclusively the source of the amber in the shaft graves.[64]

If it can be demonstrated that LH I-II Mycenaeans were procuring their tin from European sources, it may provide (as Muhly and Dickinson have suggested) a plausible explanation for Minoan Crete's interest in the mainland chiefdoms, specifically Mycenae.[65] Could European tin and amber have followed the same overland routes, to eventually end up in Aegean circulation? The scholarship surrounding European tin sources and Bronze Age Aegean tin procurement is perhaps too speculative, to assign trade relations between tin-hungry Minoans and LH I-II Mycenae. These connections, however, remain an intriguing possibility. Crete was certainly deprived of significant

[60] Richardson 1974, 63-4.
[61] Harding 2000, 18, ta. 1.1.
[62] Muhly 1985, 287.
[63] Harding and Hughes-Brock, 1974, 156-8.
[64] Muhly 1985, 287.
[65] Muhly 1979, 311-23; Dickinson 1977, 55, 105.

mineral resources, and much of the Minoan political and economic maneuvering in the Aegean, and abroad, should be examined in light of their need to procure metals.

Compelling, though highly controversial, data has been generated by geo-physicists attempting to identify the principal ore sources of the Bronze Age metals trade. The research has adopted the tools and enquiry of isotope geology to determine the lead isotope ratio, or the lead composition, intrinsic in metal ores and artifacts. Every ore deposit has "signature" lead isotope ratios. Metal artifacts with lead isotope ratios that fall within the field of the given ore (represented graphically as an ellipse) are presumed to contain metal from that ore.[66]

Data generated from lead isotope research has not been universally embraced by archaeologists. Muhly was the first to challenge the value of lead isotope analysis by drawing attention to scrap heaps (or founder's hoards) of the Late Bronze Age. These provide indisputable evidence for the recycling of metals.[67] In other words, lead isotope data is unreliable because a bronze object may contain copper from several ore sources.

In defense of lead isotope research, Stos-Gale and Gale have demonstrated the visibility of "mixed" ore sources in lead isotope data. The visibility of "mixing" has allowed them to identify relatively few Bronze Age objects that contain copper from different ore

[66] Gale 1991, 205.
[67] Muhly 1983, 216.

sources, or tin from different ore sources.[68] This observation, coupled with the relative infrequency of "mixed" objects in the archaeological record, should reduce archaeology's skepticism of lead isotope research.

Perhaps the most compelling and controversial conclusions being reached by lead-isotope research concern the role of Cyprus in the metals trade. Beginning with the Old Babylonian period, there are numerous references in Babylonian, Hittite, Ugaritic and Egyptian texts to copper in Alashia.[69] Accepting that Alasyia equates with Cyprus, the textual evidence is substantiated by the lead isotope analysis performed on the oxhide and bun ingots recovered from the Late Bronze Age Cape Gelidonya and Uluburun shipwrecks. Seventy-seven oxhide and 34 bun ingots recovered from the Cape Gelidonya shipwreck are all consistent with Cypriot ore sources. A total of 168 oxhide and 131 bun ingots recovered from the Uluburun shipwreck all fall within the Cypriot field, though their lead isotope ratios differs slightly from those of the Cape Gelidonya ingots.[70]

Cyprus' importance as the primary supplier of copper to the Near East and Egypt is well accepted in Bronze Age scholarship. Lead isotope analysis on objects recovered from the Aegean, on the other hand, is challenging long held assumptions that Cyprus was the predominant supplier of copper to the Bronze Age Aegean. Lead isotope analysis has

[68] Stos-Gale 2000, 58.
[69] Muhly 1982, 258.
[70] Pulak 2000a, 147.

been performed on 300 copper alloy objects from Bronze Age contexts on Crete and the Greek mainland. Copper alloy objects with Cypriot lead isotope ratios account for 30 percent of those analyzed.[71] Roughly 60 percent of the objects are consistent with the lead isotope ratios from the Attic ores of Laurion (Figures 2 and 3).[72] Ten percent of the copper-based objects were manufactured from non-Aegean and non-Cypriot sources that have yet to be identified.[73]

The lead isotope evidence for Cretan metal objects is relatively sparse compared to that of the mainland, though when combined with lead isotope data generated from the Cyclades, some patterns of ore sources do emerge. The EM Mesara and Mochlos (on Crete) have produced the earliest specimens from the Aegean (Figure 2). Thirty bronze objects have been analyzed from the EM Mesara, and only four are consistent with Laurion ore sources. The predominant ore source for objects from EM Mesara is Kythnos, while a small number of the EM Mesara objects are intriguingly consistent with Cypriot ore sources.[74]

Lead objects from EM Mochlos have lead isotope ratios consistent with Siphnian ores.[75] In the Cyclades, lead objects of Siphnian ores outnumber those from Laurion throughout the Early Cycladic period.[76] While Stos-Gale and Gale cite Siphnos as a poor source of

[71] Stos-Gale 2000, 66.
[72] Stos-Gale 2000, 63.
[73] Stos-Gale 2000, 66.
[74] Stos-Gale and Macdonald 1991, 267.
[75] Stos-Gale and Gale 1983, 61.
[76] Stos-Gale and Gale 1983, 60 fig. 1.

copper, the Cycladic islands of Paros, Andros, Kythnos, and Seriphos offer evidence for ancient copper mining (Figure 3). Further, lead isotope analysis has been performed on an EC II hoard of tools from Kythnos, and all ten tools fall within the Kythnos field.[77] The Cycladic islands were probably the dominant source of copper and lead in EC contexts. The Cyclades were also the most important source of lead and copper for EM Crete, although it is significant that Crete was already procuring metals from Cyprus and the Greek mainland.[78]

A shift in the mechanisms of metal procurement might be glimpsed for the first time in MM/MC III. Lead and litharge from Early Cycladic Ayia Irini on Kea (Figure 3) are consistent with the lead isotope ratios for the rest of the Cyclades (Siphnos sources outnumbering Laurion).[79] By MC III, however, the metals at Ayia Irini are almost entirely from Laurion. Metals from LM IA contexts at Thera and Syphnos are dominated by Laurion ores.[80] Limited analysis on objects from MM III contexts at Knossos and Selekanos (on Crete) suggests significant amounts of copper arrived at Crete from the mines of Laurion. Lead isotope research has isolated Laurion as a significant source of copper and lead in LM IA Cretan and Cycladic contexts.[81] Subsequently, by MM III/ LM IA, the Attic mines of Laurion may have replaced Cycladic ores as the dominant source of metals in the Aegean.

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[77] Gale, and Stos-Gale 1984, 167-8.
[78] The significance of Early Minoan procurement of Greek mainland metals will be discussed below.
[79] Stos-Gale and Gale 1983, 60, fig. 3.
[80] Stos-Gale and Gale 1983, 61.
[81] Stos-Gale and Gale 1983, 62-3.

The apparent MM III shift of metal procurement to predominantly Laurion ores may be significant to relations between the Minoan palaces and Mycenae. The Shaft Grave period at Mycenae, which was marked by an extravagant Minoan influence on grave goods, began with the latter part of the MM III pottery phase.[82] It would be difficult to demonstrate that a single chiefdom (Mycenae) was controlling the mining apparatus surrounding the Laurion ores. This suggestion, however, might go some way to explain the disproportionate wealth, and the disproportionate attention paid to Mycenae, by the Minoan palaces.

The Laurion mines are situated on the southern tip of a small peninsula jutting out of Attica (Figures 2 and 3). If Mycenae were in possession of the Laurion mines, one would expect a direct line of communication between the two sites. An overland route between Mycenae and Laurion appears too long and cumbersome to be effectively maintained by a relatively unsophisticated chiefdom (Figure 3). A nearly direct line of communication, however, could have existed across the Saronic Gulf. An individual leaving from Mycenae would have had to travel overland about 20 km to reach the Saronic Gulf.

The settlement of Thorikos, just north of the Laurion mines, was the predominant site on the Attic peninsula from the Late Neolithic onwards (Figure 3).[83] Of particular

[82] Dickinson 1977, fig. 1.
[83] Jones 1982, 170.

relavance is the identification of a private residence in Thorikos assigned a Middle Helladic date.[84] The residence has yielded several pieces of litharge, which supplies indisputable evidence for Laurion silver mining in this period. It would be difficult to argue that the Early Mycenaeans possessed metallurgists capable of transforming silver ores into precious vessels and jewelry like those displayed in the shaft graves.[85] Such metallurgists were the craftsmen of the Minoan palaces. One could argue, therefore, that the mainlanders controlled the apparatus surrounding the Laurion mines, and were trading their metals with the Minoans, in exchange for the elegant Aegean craftsmanship occurring on the Early Mycenaean mainland.

The Minoan influence that had spread across the Cyclades might also be examined in light of the Laurion mines. The settlement of Ayia Irini on Kea is of particular relevance to this discussion. Kea is the Cycladic island located closest to the Laurion mines (Figure 2). Together with Akrotiri on Thera, Ayia Irini has produced the greatest concentration of Minoan craftsmanship, and Minoan literacy, of the Cycladic settlements.[86] Any effort to resolve whether Kea was under the political control of Crete would extend beyond the scope of this study. Regardless, Kea was bound culturally and economically to Crete, and has further produced evidence for its involvement in the metals trade. Crucibles have been recovered from predominantly

[84] Mussche 1970, 130.
[85] Dickinson 1977, 78
[86] Wiener 1983, 19.

LM IB contexts at Ayia Irini (on Kea), suggesting copper was smelted from the nearby Laurion mines.[87]

Stos-Gale and Gale have suggested that the Cycladic islanders acted as middlemen in the metals trade. These may have been Minoan colonists, Cycladic sailors operating under the yoke of the Minoan palaces, or Cycladic sailors operating independently, profiting off the Minoan procurement of Laurion metals. Kea belonged to a string of Cycladic islands, including Melos and Thera, which were heavily Minoanized and had linked Crete geographically to the mainland (Figure 2). In this scenario, the islanders provided the ships and personnel to carry out trade between mainland Greece and Crete.[88]

It is significant that, in the opinion of most specialists, the Minoans did not carve for themselves any principalities on the mainland.[89] If the Minoans were indeed procuring Laurion metals, we would expect a Minoan colony at or around the Laurion ore source, unless another power was already controlling the apparatus of Laurion mining. Thorikos, just north of the Laurion mines, has produced an impressive MH to LH I-II tomb complex.[90] The apparatus of Laurion mining may, therefore, have been in the hands of the Early Mycenaeans.

[87] Wiener 1983, 19.
[88] Stos-Gale and Gale 1983, 63.
[89] Dickinson 1977, 117; see also Hagg 1983, 119-21.
[90] Cramasco and Laffineur 1999, 139-48.

Perhaps the sudden interest taken by the Minoans in MH III-LH I Mycenae represents a Minoan shift in their strategies of metal procurement. Recall that lead isotope data identifies a shift in metal procurement (to Laurion) in MM III. Lead Isotope evidence from EM Mochlos and Mesara suggests that Laurion was already a source of metals for the Early Minoans, albeit secondary to the Cycladic islands. The settlement of Thorikos has produced sherds from as early as the Neolithic, and appears to have been occupied through the entire Bronze Age. Perhaps the Early Helladic people at Thorikos were mining the Laurion ores, and exporting them to Crete. A discussion of trade between EM-MM Crete and EH-MH Greece would extend beyond the scope of this presentation. Regardless, Laurion does not appear to become a significant source of metals for the Minoans until MM III-LM IA. Minoan attention was due to the polity that controlled the apparatus of Laurion mining. This attention may have been made manifest in the shaft graves.

While raw materials from the mainland were being exported to Crete, manufactured wares were not. It is curious that while LH I ceramics appear in the Cyclades, Dodecanese, and the western Anatolian mainland, there is no evidence for them on Crete.[91] Further, the receivers of the LH I ceramics at Kastri on Kythera, Trianda on Rhodes, and Miletus on the Western Anatolian coast, were likely Minoans (or Minoanized inhabitants) (Figure 2).[92] Perhaps the Minoans on Crete, the manufacturers

[91] Dickinson 1977, 102.
[92] Wiener 1990, 135; Mee 1998, 137.

of a long tradition of elegant ceramics, exhibited some disdain for the ceramic traditions of their barbaric northern neighbors. There may have been, however, a small market amongst their provincial cousins across the Aegean.

Three out of the four non-Greek mainland sites (Kastri, Trianda, and Miletus) that have revealed LH I pottery were likely Minoan (or Minoanized) settlements. Were Early Mycenaean merchants operating within the Minoan trade and colonization network to deliver their wares? This is difficult to imagine. Further, in a period when only two questionable LH I sherds (the cups from Enkomi[93]) have been identified outside of the Aegean, objects from around the eastern Mediterranean world were being deposited into the tombs of the Early Mycenaean chiefs. The heavily Minoan character of much of these grave assemblages (e.g. Type A swords, socketed spears, tripod cooking pots)[94] suggest that the eastern exotica arrived to the mainland, together with Minoan craftsmen and Minoan wares, via Crete. These may have been a form of "gift delivery,"[95] insuring Minoan access to resources, particularly metal, that were available to the Mycenaeans. Subsequently, Minoan merchants (and/or Cycladic middlemen in service of the Minoan palaces) were likely the vehicles of contact between the Greek mainland, the Cyclades, Anatolia and Crete. There does not appear to be room (or need) in the Aegean for an LHI- IIA merchant fleet.

[93] See supra n. 25.
[94] Dickinson 1984, 116.
[95] For discussions of "gift exchange" see Chapter V.

Clearly by LH I, a mainland chiefdom (Mycenae) had established strong if not direct connections with persons of high rank and authority in the Minoan palaces. Much of the material from the shaft graves share remarkable parallels to prestige items, both domestic and imported, identified in the Minoan palaces[96] (e.g. the faience work, stone vases, ostrich egg rhytons, stone seals).[97] This one-way flow of craftsmanship (and cultural constructs) introduced the Mycenaeans to a more sophisticated world of palaces and interregional trade. What then, were the Minoan palaces gaining from this relationship? Or put in another way, what was their incentive to enter into this apparent diplomacy with their barbaric neighbors to the north? Metal, either European tin or Laurion copper may explain the sudden and extraordinary wealth enjoyed by the Mycenaean chiefdoms, and the burst of attention given them by the Minoan palaces. It may also explain why no Early Mycenaean objects or crafts are appearing on Minoan Crete.[98] The Minoans were interested in only raw materials, not the crude craftsmanship of their neighbors to the north.

[96] Wright 1995a, 70.
[97] Dickinson 1977, 116.
[98] Dickinson 1977, 102

CHAPTER III

INTERREGIONAL TRADE AND MYCENAEAN ASCENDANCY

Minoan Crete had become influential in the commerce of the eastern Mediterranean by the MM II period. The supremely elegant MM II Kamares ware has been identified in Egypt and along the Syro-Palestinian coasts.[99] MM III architecture, frescoes, jewelry and pottery have all been identified at Miletus.[100] Floor and wall paintings at Tel Kabri in Israel[101] and Tell el-Daba in the Egyptian delta[102] show striking examples of Minoan artistry. Elephant tusks, ingots, Canaanite jars, and Egyptian vases just to name a few, have been identified in the Minoan emporiums of Hagia Triada, Zakros, and Tylissos.[103] Clearly, the Minoan palaces were prominent players in Eastern Mediterranean trade, while the mainland Greeks were competing with one another as petty chiefdoms.

The late LM IA eruption of Thera marked a pivotal event in Aegean prehistory. LM IA saw the zenith of Minoan influence in the Aegean, and the period of greatest Minoan export in the rest of the eastern Mediterranean. Within a few generations of the late LM IA eruption, LM IB palaces across Crete were being destroyed and abandoned. We can, therefore, envision a systems collapse (likely triggered by the cataclysmic eruption of

[99] Betancourt 1984, 90-2.
[100] Mee 1998, 137.
[101] Niemeier 1991, 189-201.
[102] Mietak 1992, 26-8.
[103] Kopcke 1987, 256.

Thera) whereby the mechanisms of Minoan enterprise steadily deteriorated across the Aegean and eastern Mediterranean.[104]

Ultimately, the chain of disasters on Crete following the LM IA eruption saw declining Minoan commercial influence and foreign policy in the eastern Mediterranean replaced by a Mycenaean one. To quote Dickinson: "These (LM IB) destructions…certainly mark a historical watershed in the Aegean, for they are succeeded by a period in which mainland influence in the Aegean begins to replace Cretan and, in most specialists' opinion, a ruling dynasty or class of mainland origin was established at Knossos."[105] How did these epochal events affect the trading mechanisms that bound the Aegean to the rest of the Eastern Mediterranean? Let us first examine neo-palatial Knossos' role in Minoan interregional trade.

Knossos was clearly the largest and most influential of all the neo-palatial polities on Crete. Some scholars have gone so far as to declare a Knossian hegemony over neo-palatial Crete (and its colonies abroad).[106] Regardless of whether neo-palatial Knossos exerted administrative control over the entire Minoan sphere of influence, it was certainly the most powerful polity in the Aegean, and likely exerted the greatest influence on the affairs of interregional trade. The primacy of Knossos in the affairs of interregional trade might be glimpsed in two examples, one from Crete, and one from

[104] Driessen and Macdonald 1997, 106-18.
[105] Dickinson 1977, 109.
[106] Wiener 1991, 329-41.

abroad. Wiener has put forth an intriguing argument for Knossos' role in the Minoan trade infrastructure. He points to the unique geographic character of the powerful emporium of Kato Zakros. Kato Zakros, alone among the major Minoan centers, did not possess an agricultural hinterland sufficient to produce an agricultural surplus, or even to fully support the site itself. Kato Zakros, therefore, fulfilled a specialized (port) function within a wider palatial system, on which it depended for its food. This specialization and subsequent dependency, coupled with the nature and value of the prestige goods at Kato Zakros (including fine wares that are almost exclusively Knossian) suggest that neopalatial Kato Zakros was governed from Knossos.[107] Further evidence for Knossian mercantile influence abroad may be found in the export of neopalatial fine wares, which are exclusively of Knossian manufacture.[108]

The most powerful palace center on Crete certainly exerted considerable influence on Minoan policy and trade across the Aegean, and into the eastern Mediterranean. One would expect that the Knossian ports of Katsambas and Amnisos were the busiest in all of the Aegean. What then became of Knossos with the collapse of Minoan influence? And what role did the new Knossos play in the affairs of interregional trade? The elusive LM II-IIIA Knossos is a contentious period amongst specialists. Central to the debate is identifying when a Mycenaean administration replaced the Minoan one. Most scholars concur that Mycenaeans were present at Knossos in LM II. A burial

[107] Wiener 1987, 265.
[108] MacGillivray 1987, 273-9.

tradition was introduced to LM II Knossos that finds its closest parallel in burials from the Argolid from LH I onwards.[109] "Warrior graves" resplendent with impressive weaponry and bronzes mark the arrival of an elite Mycenaean warrior class to Knosssos. Ceramics are another indicator of the rising power of the Mycenaeans. For the first time, LM II Crete adopts a pottery style (the "Ephyrean" type goblet) from the mainland.[110]

In what capacity were these Mycenaeans at LM II Knossos? Were these the men who implemented a Myceanean administration? Or perhaps they were high ranking mercenaries employed by the Minoan administration, to help quell the chaos and destruction that had gathered around Knossos.

The strongest challenger to date of a Mycenaean administration at LM II-IIIA1 Knossos is Niemeier. Neimeier argues that the destructions across LM IB Crete were not related to a Mycenaean invasion, but rather to internal conflict.[111] While Knossos was more or less spared from the turmoil at the end of the LM IB period, Niemeier believes it succumbed to two destructions in LM III (a destruction in LM IIIA2 heralding Mycenaean conquest, and one in LM IIIB marking the demise of Knossos).[112] The Mycenaeans at LM II Knossos were, therefore, not the conquerors. These warriors may

[109] Driessen 1990, 124: see also Hankey 1987, 46 and Popham 1975, 372-4. The opinions of Kilian-Dirlmeier (1985, 208-9) are a notable exception to the widely held belief that Mycenaeans appeared in the "Warrior Graves." She does not see a cultural break in the burials, from a Minoan to a Mycenaean tradition. Her argument rests primarily on the interred weapons, which all belong to Minoan types. Minoan type weapons, though, have been identified in the shaft graves of Mycenae. Minoan weapons, therefore, need not belong to Minoans.
[110] Wace 1956, 123-7.
[111] Neimeier 1983, 212-4; Furumark 1950, 250.
[112] Neimeier 1983, 214; Hallager 1977, 94.

have been mercenaries hired to bolster Knossos' defenses against hostile Cretan elements.[113]

He further takes issue against a Mycenaean conquest in LM II, identifying a time-lapse between the numerous LM II destructions across Crete. Some proponents of an earlier Mycenaean administration have pointed to the LM II destructions as indicative of a singular Mycenaean attack, heralding the Mycenaean conquest of the island.[114] These destructions, Niemeier maintains, were symptomatic of an unrest or a disintegration that was gradually overtaking the island.[115]

The most compelling argument, contra Niemeier, for the implementation of a Mycenaean administration before the LM IIIA2 destruction of Knossos, is the relative date of Linear B tablets recovered from a deposit known as the "Room of the Chariot Tablets". The destruction deposit in the "Room of the Chariot Tablets" includes about 600 Linear B tablets, ivories, bronze hinges, a piece of curved wood, and sealings.[116] Driessen argues that the destruction of the "Room of the Chariot Tablets" significantly predates the final LMIIIA2 destruction of the palace. The appearance of the Linear B tablets in this destruction deposit would necessitate an earlier Mycenaean administration at Knossos, not long after the LM IB destructions on Crete.

[113] Niemeier 1983, 212-4.
[114] Hood 1981.
[115] Niemeier 1983, 209-10.
[116] Driessen 1990, 61-4.

Driessen has demonstrated that the "Room of the Chariot Tablets" architectural relationship with adjacent rooms and passages highlights its destruction and disuse, while the adjacent rooms and passages were still functional.[117] His hypothesis is corroborated by the sealings in the "Room of the Chariot Tablets" destruction deposit. Sealings blending features from LM IB deposits (flat-based nodules) with features from LM IIIA deposits (flattening of the seal) suggest (to Driessen) that the deposit is transitional (in sealing terms), and could date to LM II or the very beginning of LM IIIA.[118]

Driessen's hypothesis has been gaining support in recent scholarship.[119] Evidence from the "Room of the Chariot Tablets" provides the most compelling argument to date for an early Mycenaean administration at Knossos. Consequently, the appearance of the LM II "Warrior Graves" likely heralded a conquering class of Mycenaeans at Knossos. Interregional trade through LM IIIA Knossos, governed under a Mycenaean administration, will be examined below.

What was happening on the LH II mainland as Crete crumbled? The growing strength of the Early Mycenaean chiefdom polities (at the height of Minoan power) has already been hinted by the magnificence of the tholoi and shaft graves. The Pylos Regional Archaeological Project (PRAP) survey in Messenia has best demonstrated the

[117] Driessen 1990, 80-3.
[118] Driessen 1990, 64-5.
[119] Shelmerdine 1992, 587; Cline 1994; Rehak and Younger 2001, 452.

mechanisms for this growth. Pylos remained the predominant settlement on the Messenian peninsula from the Middle Helladic period onwards. Pylos was also the only settlement in Messenia to experience sustained population growth. Pylos' pre-eminence was marked early, with the construction of a late MH tholos (roughly contemporary with the first shaft graves at Mycenae). Only one other settlement in Messenia (Osmanaga) constructs a tholos this early. Within two generations (LH I) Pylos had erected another tholos. LH I-II Messenia was then marked by a proliferation of tholoi across the peninsula, suggesting the emergence of several rival chiefdoms. This apparently represents a period of intense competition between the chiefdom polities.[120]

Minoan objects begin appearing in Messenia in MH III[121] (contemporary with the first construction of a tholos in Messenia, and the earliest shaft graves at Mycenae). The extent of Minoan material culture entering the LH I-II mainland has already been discussed in chapter II. The mainland, however, was being permeated by more than Minoan objects. Minoan craftsmen may have been working under the auspices of the mainland chiefdoms.[122] More importantly, Minoan cultural constructs were being transmitted through these contacts, and were permeating the world-view of the mainland Mycenaeans. In this period of intense competition between the mainland chiefdoms, the polity that was able to absorb the greater degree of sophistication through their contacts with the Minoans, was one up on its rivals. Renfrew's "peer-polity" model of cultural

[120] Shelmerdine 2001, 113-128; Bennet 1999, 9-18.
[121] Korrès 1983, 144.
[122] Wright 1995, 69.

exchange fits quite well within the political and economic dynamics of the Early Mycnenaean mainland.[123]

It seems the most powerful chiefdom polities (i.e. in Messenia and at Mycenae) were the most vigorous in maintaining contacts with the Minoans. Subsequently, these chiefdoms were the polities became more and more like the palaces on Crete. The primary chiefdoms grew in size and complexity, and by the end of the Early Mycenaean period (the period marking Minoan collapse) they were engaged in the political and economic consolidation of their respective regions. Another burst of tholoi construction around LH II Pylos has been interpreted by Bennet to be a signpost "marking the landscape under (Pylian) sponsorship."[124] In other words, Pylos was becoming a kingdom.

The rise of Mycenaean influence in the Aegean, and the fall of Minoan, disrupted trade patterns that had been more or less established in the LH I/LM IA period. Relations between the LH I mainland and LM IA Crete are best characterized in the Aegean by a

[123]Renfrew (Renfrew and Cherry 1986, 1) defines peer polity interaction as "…the full range of interchanges taking place (including imitation and emulation, competition, warfare, and the exchange of material goods and of information) between autonomous (i.e. self governing and in that sense politically independent) socio-political units which are situated beside or close to each other within a single geographical region, or in some cases more widely." This model examines the feedback dynamic of cultural change between polities, and ultimately the mechanisms of increasing societal complexity within a defined geographical locus. Peer-polity interaction occurs between political and economic equals (or near equals) sharing similar cultural constructs and modes of production. Peer- polity is thus set apart from models of cultural diffusion, or from models based on concepts of "core" and "periphery" which suggest a stronger polity is exerting or diffusing, while a weaker is absorbing.

[124] Bennet 1999, 15.

Minoan hegemony over affairs of interregional trade. The LM IB-II deterioration of Minoan enterprise, and its subsequent effect on imports to the Greek mainland, is further testament to Crete's role in importing exotic objects to Greece. Where ten non-Aegean objects have been identified in LH IIA contexts (pre-Minoan collapse), only one has been identified in LH IIB (post-Minoan collapse).[125]

One can also imagine the first interregional exports of the Mycenaeans, LH I-IIA pottery, delivered to the eastern Mediterranean on Minoan ships (or on foreign ships visiting Minoan ports). Recall Hankey's observation at the introduction of this thesis,[126]stating that exported Minoan and Mycenaean wares in the LM IB/LH IIA period are difficult to differentiate from one another. She suggests this phenomenon is indicative of "joint Minoan and Mycenaean exploration rather than separate trade missions."[127] Her phrasing may be somewhat misleading, as it places the Early Mycenaean export economy on equal footing with the Minoan one. This phenomenon probably does not represent joint ventures, but rather a Minoan export economy that had found a small market for Mycenaean inspired wares.

A shift in export patterns from LM IB to LM II, and LH IIA to LH IIB, most clearly demonstrate this period of transition as it relates to interregional trade. Where LM IB ceramics are represented at Egyptian Thebes and Armant, not a single LM II sherd has

[125] Cline 1994, 13.
[126] See supra n. 25.
[127] Hankey 1993a, 103.

been identified in Egypt.[128] The same can be said for the Levant. LM IB ceramics appear at sites like Alalakh, Ugarit, Byblos, Gezer, and Lachish, but there is no Minoan pottery in the Levant from the LM II period.[129]

The Minoan collapse does not appear as devastating on the fledgling export economy of the Mycenaeans. In Egypt the distribution of LH IIB wares just surpasses LH IIA (four and three sites respectively).[130] Sites with LH IIA wares in Syro-Palestine outnumber sites with LH IIB (eight and three respectively).[131] On Cyprus, sites with transitional LH IIB-IIIA1 ceramics outnumber sites with LH II designations (four and one respectively).[132]

It was suggested earlier that the Minoans were responsible for joining the mainland to the world of interregional trade prior to the LM II/LH IIB period. The absolute paucity of LM II wares in the eastern Mediterranean, coupled with the continuation of Mycenaean export in this period (albeit meager[133]), suggests the LH IIB Mycenaeans were no longer relying on Minoan ships (or Minoan contacts) to export their wares. Did the pre-palatial Mycenaeans begin setting out on overseas merchant ventures, filling the void left by the Minoan fleets? Were non-Aegean merchants re-routing to the mainland, to include the Greeks within the circuit of interregional trade? This important

[128] Hankey 1993b, 110.
[129] Hankey 1993a, 104.
[130] Hankey 1993b, 113-4.
[131] Hankey 1993a, 105-7.
[132] Catling 1964, 26-7.
[133] See supra pp. 5-6.

consideration will be addressed further into the thesis. Indeed, my ultimate objective is to discuss possible mechanisms of trade that joined the Aegean to the rest of the eastern Mediterranean, after the LM IB collapse of Minoan enterprise.

THE AEGEAN RECOVERS

LH IIIA1 marks the appearance of palatial polities on the Greek mainland.[134] The emergence of the Mycenaean palace can no longer be attributed simply to the mainland's borrowing of palatial constructs and craftsmen from the Minoans. Nor can it be reduced to the Mycenaeans filling in an economic and political vacuum that was left by the collapse of Minoan enterprise. These models deny the uniquely Mycenaean architectural forms, and the uniquely Mycenaean political and economic developments, which gave rise to the LH IIIA1 palaces.[135] The LM IB-II collapse of Minoan enterprise, however, and the subsequent appearance of Mycenaeans at Knossos, has strong implications for the emergence of palaces on the LH IIIA1 mainland. Renfrew's peer-polity model might explain the interconnection and influence between Knossos and the mainland chiefdoms through this difficult period.[136] Suffice it to say, the emergent palace polities on the LH IIIA Greek mainland rose to the political and economic sophistication of Knossos, which was under a Mycenaean administation in LM IIIA1.

[134] Dabney and Wright 1988, 48.
[135] Dabney and Wright 1988, 47.
[136] See supra n. 123.

LH IIIA1 import and export data suggests that the relative isolation of the LH IIB period (only one non-Aegean import) continued through LH IIIA 1. Only seven exotic wares have been identified in LH IIIA1 contexts.[137] Not one LH IIIA1 sherd has been identified in an Egyptian context,[138] and only two sites in Syro-Palestine (Kamid el-Loz and Gezer) have yielded LH IIIA1 ceramics.[139] LH IIIA1 pottery remains sparse on Cyprus as well, confined mostly to Enkomi and Halan Sultan Tekke.[140]

Conversely, 51 non-Aegean imports have been identified in LM IIIA1 contexts with the majority in and around Knossos.[141] It seems LM IIIA1 Knossos possessed a clear advantage in interregional trade over the LH IIIA1 palaces on the mainland. The Mycenaeans at Knossos had inherited a palatial polity that was already well established on Crete, and recognized as a principal emporium in the Aegean. Knossos could therefore turn its attention and economy outward. Consequently, Knossian trade relations with the Near East were being renewed, while the mainland palaces were more concerned with the political and economic consolidation of their respective regions. Knossos may have continued its role in joining the mainland to the sphere of interregional trade. Conversely, one might also imagine Knossos an economic rival to the mainland palaces of this period, where Knossos clearly possessed the upper hand in affairs of interregional trade.

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[137] Cline 1994, 14, 258-75.
[138] Hankey 1993b, 113-4.
[139] Hankey 1993a ,105-7.
[140] Stubbings 1951, 27-31.
[141] Cline 1994, 14, 258-75.

LH IIIA2 pottery surged into the eastern Mediterranean, appearing on 27 sites in Syro-Palestine,[142] nine sites in Egypt,[143] and sites all over the island of Cyprus in great quantities.[144] The majority of the LH IIIA2 pottery identified in Egypt, Syro-Palestine and Cyprus was manufactured specifically for export. The origin of their manufacture was almost exclusively the Argolid.[145] An export economy had thus taken root in either Mycenae or Tiryns (probably both). This sudden proliferation of Mycenaean wares suggests that the palaces had consolidated their power on the mainland, and were thus in a position to turn their attention abroad. Knossian trade relations, on the other hand, were just as vigorous in LM IIIA2 (66 imports) as they were in LM IIIA1 (51 imports). This was probably a period of growing competition between the Mycenaeans at Knossos and the mainland palaces.

In summary, LM IIIA1 Crete was first to re-establish significant trade relations between the Aegean and the rest of the eastern Mediterranean. LH IIIA1 Mycenaeans were marginally included into the sphere of interregional trade, and were clearly overshadowed by LM IIIA1 Knossos. The mainland Mycenaeans had entered the game late. If there was any scenario where the mainland Mycenaeans would have had to pursue an aggressive policy towards interregional trade, LH/LM IIIA2 was it. The mainland Mycenaeans had to penetrate the sphere of trade relations already established between Knossos and the rest of the eastern Mediterranean. This was partly

[142] Hankey 1993a, 105-7.
[143] Hankey 1993b, 109-15.
[144] Catling 1964, 38.
[145] Catling, Richards and Blin-Stoyle 1963, 94-115.

accomplished by the palaces' ability to generate a powerful export economy and probably also, lucrative emporia.[146] The LH IIIA2 Mycenaeans might have additionally sought to disrupt the lines of trade and communication linking Knossos with the Eastern Mediterranean. Hittite grievances against Ahhiyawan (Mycenaean) campaigns of piracy began in LH IIIA1.[147] Could LH IIIA2 mainland Mycenaeans have also waged a campaign of piracy against their Knossian rivals? If so, these measures were apparently not enough to rival the mighty Cretan center. It took the destruction of LM IIIA2 Knossos for the mainland Mycenaeans to finally gain supremacy in the Aegean. Cline has made some interesting observations that would suggest LM IIIA2 Knossos was the victim of a mainland assault from Mycenae.[148] The possibility of a Mycenaean invasion of LM IIIA2 Crete has already been discussed.[149] It was also mentioned that much of the LH IIIA2-IIIB pottery identified in Egypt, Syro-Palestine and Cyprus was manufactured specifically for export; and that the origin of manufacture was almost exclusively the Argolid.[150] Argive influence in trade is demonstrated in import data to the LH IIIA-B Aegean. LH IIIAI-II Mycenae had the largest number of non-Aegean imports on the mainland.[151] Further, the non-Aegean imports at both LH IIIB Mycenae and Tiryns (Tiryns was likely a subordinate of Mycenae)[152] account for over half of all

[146] The large quantity of foreign objects identified at coastal Tiryns suggests it was regualarly visited by seagoing merchant ships.
[147] Güterbock 1983, 133-7.
[148] Cline 1994, 10.
[149] See supra n. 113.
[150] See supra n. 146.
[151] Cline 1994, 16.
[152] Dickinson (1994, 14, 78) notes that Mycenae and Tiryns are only 15 km apart, so it seems highly unlikely that they ruled two autonomous kingdoms. Tiryns is located on the coastline, and likely served as the emporium of Mycenae.

the imports identified in the LM/LH IIIB Aegean.[153] Cline (following Catling et al.) concludes that a LH IIIA2 export economy had taken root on the mainland, whose centers of manufacture and distribution were the palace complexes of the Argolid.

As Cline sees it, LM IIIA2 Knossos was jeopardizing a mainland export economy that was centered on the palaces of Mycenae and its suggested emporium, Tiryns. In an effort to consolidate the trade routes that joined the Aegean to the rest of the eastern Mediterranean, Mycenae launched an invasion of Crete and toppled the great trading center of Knossos.[154]

This hypothesis is certainly intriguing, though Cline concedes any number of causes may have brought down LM IIIA2 Knossos, including an earthquake, internal dissent, or the emergence of a rival center on Crete (Khania).[155] Regardless, the fall of Knossos eliminated the most powerful interregional trading economy in the Aegean. Never again would a Cretan polity rise to the power and influence of Knossos. The mainland subsequently enjoyed exclusive contacts with the powers of the eastern Mediterranean.[156]

While regular trade relations between the Mycenaeans and greater Levant can be conclusively demonstrated, the mechanisms of this contact continue to intrigue and

[153] Cline 1994, 16.
[154] Cline 1994, 10.
[155] Cline 1994, 10.
[156] Cline 1994, 10.

elude Bronze Age scholarship. Data generated from the recently excavated Late Bronze Age Uluburun shipwreck, however, is producing an extraordinary body of evidence for trade between the two regions. Early LH IIIB pottery forms have been recovered from the shipwreck.[157] Knossos had collapsed, and the mainland chiefdoms were ascendant in the Aegean. This was also the zenith of Mycenaean export in the eastern Mediterranean. Before investigating the data generated from the Uluburun shipwreck, it will be beneficial to explore all other evidence and hypotheses that suggests mechanisms of trade between the Mycenaeans and the greater Levant.

[157] J. Rutter, personal communication.

CHAPTER IV

AEGEAN MERCHANTS AND MERCHANT ACTIVITY IN THE AEGEAN

Chapters II and III highlighted the role of Minoan enterprise in joining the Early Mycenaeans to the sphere of interregional trade. If Minoan merchants were delivering exotic wares to Crete, which were then funneled to the mainland, the exported LH IIA wares identified in Cyprus, Syro-Palestine and Egypt were likely mixed into the cargoes of Minoan ships. A discussion of Minoan merchant activity in the eastern Mediterranean should, therefore, begin this investigation, seeking the first mechanism of trade joining the Mycenaeans to the greater Levant.

Minoan merchants and Aegeans bearing Minoan wares are clearly represented in the texts and iconography of the Bronze Age. A Middle Bronze II tablet from the palace of Mari records a consignment of tin destined for a "Kaptara" (Cretan) visiting Ugarit.[158] The transaction is benefiting from the presence of an Ugaritic dragoman, or interpreter. A Minoan-speaking interpreter at Ugarit is suggestive of Ugaritian-Cretan trade relations that were considerably more developed than the sparse archaeological evidence will allow.[159]

[158] Malamat 1971, 37-8.
[159] Wiener 1991, 328; see also Wachsmann 1998, 83.

The annals of Thutmose III record Keftiu (Cretan) ships in Levantine ports, laden with great quantities of timber headed for Egypt.[160] There has been considerable speculation and debate over the origin of these ships. The only other mention of Keftiu ships in Egyptian texts also dates to the reign of Thutmose III, and relates to ships being built or repaired at the royal dockyard at *Prw nfr*.[161] Glanville believes these ships were of Aegean origin,[162] which is plausible only if the dockyard archives are recording the repair rather than the construction of the Keftiu ships (see below). Säve Soderbergh, on the other hand, believes the Keftiu ships are an Egyptian class of seagoing vessel. [163] Presumably, these Egyptian built ships were designed to carry out seafaring missions to the Aegean.[164]

Wachsmann has introduced a third possibility. A striking Syro-Palestinian presence is demonstrated at *Prw nfr*. Both Syro-Palestinian shipwrights and the worship of the Canaanite gods Baal and Astarte are recorded in the royal dockyard texts.[165] Wachsmann suggests Syro-Palestinians were building the Keftiu ships at *Prw nfr*.[166] These ships belonged to a Syro-Palestinian class of seagoing vessel that was (according to Wachsmann) regularly sailed by Syro-Palestinians to the Aegean.

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[160] Breasted 1906, 206.
[161] Glanville 1931, 116, 121, Wachsmann 1998, 51.
[162] Glanville 1932, 22.
[163] Säve Soderbergh 1946, 43-5.
[164] Hayes 1980, 387.
[165] Säve Soderbergh 1946, 53-4; Wachsmann 1998, 51-2.
[166] Wachsmann 1998, 52.

Wachsmann does not explain, though, why the Syro-Palestinians were building ships in Egypt to be sailed by Syro-Palestinians. This hypothesis becomes more problematic when we consider that the source of much of the timber in the eastern Mediterranean was the cedar forests of Syro-Palestine. Why would Lebanese timber be shipped to Egypt so that a Syro-Palestinian shipwright could build a class of merchant vessel, to be sailed to the Aegean by Syro-Palestinian merchants? A simpler explanation has the Syro-Palestinian shipwrights building ships for the Egyptians at *Prw nfr*.

Wachsmann does not believe Egyptian merchant ships had any role in trade between the Aegean and Egypt. His hypothesis is based on the lack of evidence for Egyptian seafaring beyond the Syro-Palestinian coast,[167] the conclusive evidence for Syro-Palestinian ventures to the Aegean,[168] and his belief that with the collapse of Minoan civilization, Syro-Palestinian or Cypriot intermediaries were the principle trading agents between the Aegean and Egypt.[169] Wachsmann's perception of interregional trade will not allow for the possibility of Egyptian merchants sailing to the Aegean, and his dismissal of evidence based on the previous lack of evidence for Egyptian merchant ventures to the Aegean, becomes circular. I do not agree with Wachsmann that the Keftiu ships anchored on the Syro-Palestinian coast, and being built or repaired at *Prw nfr*, were sailed by Syro-Palestinians.

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[167] Wachsmann 1998, 52
[168] See infra p 70.
[169] Wachsmann 1987. This hypothesis is based on the cessation of Aegeans represented in Egyptian tomb iconography, contemporary with the collapse of Minoan civilization.

One of two possibilities exists for the Keftiu ships, depending on whether the ships at *Prw nfr* were being built or repaired. If they were being built, the Egyptians (or perhaps Syro-Palestinian shipwrights in the service of an Egyptian fleet) were probably manufacturing a class of ship at *Prw nfr*, which was sailed to the Aegean. Conversely, if these "Keftiu ships" were being repaired, it is possible that they were Aegean merchant vessels overhauled at the Egyptian port.

Minoans represented in the 18th dynasty tomb decorations of Senmut, Puimire, Intef, Useramun, Mencheperresonb, and Rechmire may be distinguished from the merchants in the Mari texts, and the Keftiu ships if they are Aegean. The tomb paintings portray Minoans bearing tribute, or offering gifts to Pharaoh.[170] Like the above-mentioned merchants, the Minoans in the tomb decorations are engaged in the delivery of commodities from one location to the next. This is certainly a defining attribute of a merchant, but texts accompanying a register in the tomb of Rechmire invoke an altogether different image of the tribute bearers (Figure 4). The Minoans are announced as "…the chiefs of (the) Keftiu-land (Crete) and the islands which are within the Great Sea…"[171] These individuals then are not merely Minoan merchants delivering wares, but high-ranking representatives of the Minoan court. Should we call them merchants, or are they ambassadors?

[170] Wachsmann 1987, 103.
[171] Davies 1943, 20.

The Amarna Letters might clarify the mission of the Minoans in the Theban tombs. The Amarna correspondences were delivered by the ubiquitous "messengers" (sometimes called "envoys") of the texts. The "messengers" were the pawns of a highly elaborate game of Late Bronze Age interregional diplomacy. These were the men appointed by their king to deliver his well wishes, demands and grievances to his counterparts in other kingdoms. Words, however, were not all that was delivered. Gifts accompanied the messengers--usually of extraordinary quality and quantity.[172]

Two separate grievances in the Amarna Letters refer to "messengers" as merchants. In one, the king of Karaduniyas insists that pharaoh finds and executes the murderers of his *merchants*, whom he also refers to as his "servants." He warns that if the murderers are not executed, "they are going to kill again, be it a caravan of mine or your own *messengers*, and so *messengers* between us will thereby be cut off."[173] In another, we read the king of Alashiya demanding pharaoh to "let my *messengers* go promptly and safely so that I may hear my brother's greeting." In the next sentence the Alashiyan king reminds pharaoh: "These men are my *merchants*."[174] Clearly, "ambassador" is synonymous with "merchant" in these texts.[175] The two roles are joined into one individual, placed in charge of a politically motivated delivery of gifts. The tribute bearers represented in the Theban tombs should therefore be treated as the Minoan equivalent of the "messenger-merchants" in the Amarna Letters.

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[172] The phenomenon of "gift exchange" will be discussed in greater detail in Chapter V.
[173] Moran 1992, *EA* 8.
[174] Moran 1992, *EA* 39.
[175] Astour 1972, 23-4; see also Knapp 1991, 49; Cline 1994, 85, Wachsmann 1998, 307.

The scenes of "gift exchange" in the Theban tombs leave little doubt that Minoan palaces assumed a significant role in aspects of interregional trade. The Mari tin archives, on the other hand, or the annals of Thutmose III (if the keftiu ships are Aegean), do not reveal so explicitly palatial agency. Numerous scholars including Merrillees,[176] Kemp and Merrillees,[177] Muhly et. al.,[178] Knapp,[179] Knapp and Cherry,[180] Sherratt,[181]Yannai,[182] and Cline[183] have argued for the important role of profit-seeking Bronze Age merchants in interregional trade. A powerful merchant class on Minoan Crete has been suggested by Brannigan, though his observations are confined to the Old Palace period[184] (which is prior to the events discussed in this thesis, namely the appearance of exotic wares on the Greek mainland). Even Wiener (who argued for a Knossian hegemony of interregional trade in Chapter III) consents that private enterprise may have operated outside of the interests of the Minoan palace, by noting: "one should not underestimate the ingenuity of traders in the art of barter."[185]

The phenomenon of private vs. palatial enterprise in Bronze Age trade will be discussed more thoroughly in Chapter V. For now, we may note that the Minoan merchants of the

[176] Merrillees 1968, 195-7; 1974, 7-8.
[177] Kemp and Merrillees 1980, 276-80.
[178] Muhly et. al 1977, 361-2.
[179] Knapp 1993, 338-9.
[180] Knapp and Cherry 1994, 146.
[181] Sherratt 1999.
[182] Yannai 1983.
[183] Cline 1994, 86-8.
[184] Brannigan 1989, 66-7.
[185] Wiener 1987, 264.

Mari archives, or perhaps the annals of Thutmose III, were profit seeking entrepreneurs. Additionally, one might imagine private merchants arriving to the shores and chiefdoms of Early Mycenaean Greece, bartering their exotic wares to the Greeks.

In Chapter II the shaft grave assemblages were described as sharing remarkable parallels to prestige items, both domestic and imported, identified in the Minoan palaces (e.g. the faience work, stone vases, ostrich egg rhytons, stone seals). [186] It was also suggested that the Minoan palaces would have gone to considerable length to secure the metal resources that appear to have been exploited and/or procured by the Mycenaean chiefdoms. Consequently, the appearance of exotic luxuries on the Greek mainland does not suggest the activities of Minoan private entrepreneurs, rather a palatial administration that was actively involved in the delivery of non-Aegean wares to the mainland. These may have represented a form of "gift exchange" joining the Mycenaean chiefdoms and Minoan palaces in trade and diplomatic relations. With the demise of Minoan enterprise these networks naturally collapsed, and the Mycenaeans were forced to adopt new strategies of interregional trade.

THE ELUSIVE MYCENAEAN MERCHANT

Three possible scenarios exist for Mycenaean merchant activity in the iconography and texts of the eastern Mediterranean. The first is related to Aegeans represented in the

[186] Wright 1995, 69.

18th Dynasty tomb of Rechmire. The second and third appear in a Hittite treaty, and a letter from Hattusili III respectively. The latter two presume the disputed *Ahhiyawan*/Mycenaean equation to be correct.[187]

The latest in the series of 18th dynasty tombs to depict an Aegean bearing tribute are from the tomb of Rechmire, contemporary with the end of the reign of Thutmose III, or the beginning of the reign of Amenhotep II. After Rechmire, tribute (or gift) bearing Aegeans disappear from the iconographic record of Egypt entirely. The following presentation of the Rechmire tomb paintings will adhere to the "low chronology," which fixes objects of Aegean manufacture identified in Egypt under the reign of Thutmose III (or the beginning of the reign of Amenhotep II), to the end of LM IB, or the period marking the collapse of Minoan enterprise.[188]

A register of Aegeans in the tomb of Rechmire was painted anew, with different outfits (Figure 5). These emissaries (or merchant-ambassadors) were originally adorned with loincloths, and some manner of codpiece (or quiver).[189] The Aegeans were later repainted to wear kilts. This sartorial shift has long been thought to represent a shift of power in the Aegean from the Minoans to the Mycenaeans (as the representation dates to

[187] See (Neimeier 1998) for arguments equating *Ahhiyawan* to Mycenaean.
[188] This "low" chronology accounts most convincingly for the termination of references to Minoans in Egyptian texts after the reign of Thutmose III, by placing it at the end of LM IB. Further, the last depiction of an Aegean (Minoan) in Egyptian iconography is found in the tomb of Rechmire, which is also dated to the end of the reign of Thutmose III, or the beginning of the reign of Amenhotep II (Wachsmann 1987, 128-9; Hankey 1987, 53).
[189] Wachsmann 1987, pl. XLII.

this transitional period).[190] Mycenaeans painted in the tomb of Rechmire would have serious implications for a discussion of Mycenaean trade. Rehak, though, has recently demonstrated that Minoans have been represented wearing kilts from MM II onwards,[191] while the only representation of a Mycenaean kilt comes from a LH IIIB fresco at Pylos.[192] It is therefore highly unlikely that this sartorial shift represents a Mycenaean emissary painted over a Minoan one. The tomb of Rechmire, therefore, should not be used as evidence for Mycenaean merchant activity.

A stipulation in the Hittite "Amurru Vassal Treaty"[193] has provided the most compelling and widely accepted evidence for a Mycenaean merchant fleet.[194] "The Amurru Vassal Treaty" was issued under the reign of Tudkhaliyia IV (1265-1235), corresponding to the latter part of LH IIIB, or a period of general economic decline and growing political instability in the Eastern Mediterranean.[195] The treaty was enacted through a period of hostility between the Hittites and the Assyrians.

In the treaty the Hittite king lays down several stipulations to his vassal at Amurru, including one that is widely accepted as reading: "no ship may sail to him (the

[190] Immerwahr 1989, 89-90; Smith 1965, 33-5.
[191] Rehak 1996, 36.
[192] Rehak 1996, 49.
[193] The treaty is also referred to as the "Sauskamuwa Treaty."
[194] Bibliography for over 5 decades of scholarship surrounding this text can be found in Steiner (1989).
[195] Güterbock 1983, 135-7; Hankey 1987, 54.

Assyrians) from the land of *Ahhiyawa*."[196] At first glance, there seems little doubt this is a Hittite blockade imposed upon Ahhiyawan merchant ships. Assyria was land-locked and relied upon the coastal emporiums of Amurru to gain access to the Mediterranean. Amurru was thus in a position to disrupt trade relations between the Ahhiyawans and the Assyrians.[197] Steiner, however, has recently challenged this widely accepted interpretation on two fronts-- one contextual and one philological.

The disputed line is grouped with a list of military provisions and preparations. These martial stipulations are separated, in the texts, from specifically economic stipulations imposed upon the vassal king.[198] This grouping with predominantly martial stipulations has suggested to Steiner that the passage should belong to a military plan of action being assembled against a military (rather than a merchant) foe.

In the same article Steiner challenged the very translation of the passage. Philological difficulties including the spelling of the term "Ahhiyawa" in the passage (it is not spelt as the toponym), and problematic verb agreements have led Steiner to a profoundly different translation of the passage.[199] Rather than "no ship may sail to him from the land of Ahhiyawa," the new interpretation replaces "Ahhiyawa" with "warlord" and reads: "No ship of the warlord may sail to him." In other words, no Amurru admiral

[196] Sommer (1932, 322) was the first to translate this passage, and the first to assert the passage describes a blockade against Ahhiyawan shipping.
[197] Bibliography for over 5 decades of scholarship supporting this interpretation can be found in Steiner (1989).
[198] Steiner 1989, 400.
[199] Steiner 1989, 400-1.

may join with Assyria.[200] The new translation is better placed with the associated military provisions of the treaty, and more importantly, removes the Ahhiyawans from any consideration of the Hittitie trade embargo against Assyria.

Moreover, Steiner's observations find corroboration in the absence of Mycenaean imports east of the Euphrates.[201] The erection of a blockade between Ahhiyawan merchants and Assyria presumes the existence of previous trade relations. As ubiquitous as LH IIIB pottery is in the eastern Mediterranean, it is significant that it never reached Assyria. The "Amurru Vassal Treaty" should, therefore, not be used as evidence for Mycenaean merchant activity.

Allusions to Ahhiyawan gift giving are voiced in two letters of Hattusili III. The first letter was addressed to an unknown king and reads: "Concerning the gift of the king of Ahhiyawa, about which you wrote to me, I do not know how the situation is and whether his messenger has brought anything or not."[202] The second (the so-called "Tawagalawa Letter") is a grievance of a Hittite king, probably Hattusili III, to a king of Ahhiyawa. He complains, "But when [my brother's messenger] arrived at my quarters, he brought me no [greeting] and [he brought] me no present…"[203]

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[200] Steiner 1989, 401.
[201] Niemeier 1998, 25.
[202] *Keilschrifttexte aus Boghazköi* II rev. 11'-14'; Zaccagnini 1987, 58.
[203] *KUB* XIV3 (CTH181) I53-55.

Clearly Ahhiyawan emissaries were recognized in foreign courts. The protocall of the Bronze Age emissary was to deliver and present gifts to foreign courts, as we have seen with the "merchant-ambassadors" of the Amarna Letters, or the "chiefs of the Keftiu land" in the Theban tombs. It is perhaps a stretch, though, to call the Ahhiyawan messengers "merchants", particularly as they were recorded falling short of their gift giving obligations. Regardless, the existence of Mycnaean ambassadors (who may or may not have acted as merchants) will become an important consideration later into the discussion. For now, the investigation will turn to the texts and archaeology of the Mycenaean Aegean.

INTERREGIONAL TRADE AND THE LINEAR B TEXTS

The administration of trade remains an elusive topic in the Linear B tablets. Scholars are still perplexed by a Mycenaean lexicon that has yet to produce a word for "merchant." On the other hand, the tablets reveal something of the cosmopolitan character of the Mycenaean palaces. The appearance of people and words with foreign associations suggest the palace was an interregional center, hosting immigrants (or detaining slaves) from around the eastern Mediterranean. Egyptian ethnonyms (*a3-ku-pi-ti-jo*, 'Memphite', *mi-sa-ra-jo*, 'Egyptian'), as well as Anatolian (*a-si-wi-ja*, 'Lydian') and Cypriot (*ku-pi-ri-jo*) have been identified on Knossian Linear B texts. Anatolian (*mi-ra-ti-ja*, 'Milesians', *ki-ni-di-ja,* 'Knidians', *ra-mi-ni-ja* 'Lemnians') and

Cypriot (*ku-pi-ri-jo*) ethnonyms appear on texts from the mainland.[204] The palaces' cosmopolitanism might be glimpsed in the Semitic or Anatolian loan words for spices and ivory (e.g. *sa-sa-ma*, 'sesame'*, e-re-pa,* 'ivory'), and loan words of unknown origin for metals (*ko-ru-so* 'gold'), dyes (*po-pu-re-ja*, 'purple dye') and specific types of wood (*pu-ko-so*,'boxwood').[205]

While foreign people appear in the Linear B texts, and their words for various food stuffs and raw materials have entered into the Linear B lexicon, there is little in the archives to suggest a mechanism, which might have imported foreign material culture and raw materials into the palaces. Nor is there any obvious indication of a Mycenaean export economy in the texts.[206] The tablets, on the other hand, do reveal some aspects of Mycenaean seafaring culture. Additionally, there may exist officials in the palatial administration whose range of responsibilities extended into the affairs of interregional trade.

The Linear B tablets say little about the construction, maintenance, operation and control of seagoing ships. The most significant texts relating to maritime matters are found in three tablets at Pylos.[207] Tablet PY An 610 lists a summons of approximately 600 rowers (*e-re-ta*).[208] PY An 1 belongs to the same set as An 610, summoning 30 rowers.

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[204] Shelmerdine 1998, 295-6.
[205] Palaima 1991, 278-9.
[206] Shelmerdine 1998, 293; Palaima 1991, 276.
[207] Palaima 1991, 285-6.
[208] The total of 600 is based on the restoration of the damaged (incomplete) PY An 610 tablet which lists only 569 men.

The last of the "rowers" tablets, PY An 724, belongs to a separate set, and identifies rowers who are absent from this muster.[209]

It is significant that all three "rowers" tablets were the work of Pylos' "master scribe" (or main archivist at Pylos Hand 1). Importantly, he was also the scribe of the *o-ka* tablets.[210] The *o-ka* tablets are lists of personnel, arranged in groups and assigned to coastal locations along the Messenian coast (of the Pylos kingdom). A military interpretation of the *o-ka* tablets stems mostly from the first line of the set, which denotes "watchers are guarding the coastal areas."[211] High ranking officials titled *e-qe-ta* have been stationed with select groups of "watchers". [212] The authoring by Pylos' "master scribe" of the *e-re-ta* and *o-ka* documents suggests the administrative importance of these tablets.[213] Might these registers all be related to a series of administrative actions, implemented towards a singular administrative goal? The palatial authority is simultaneously summoning large numbers of rowers, and dispatching officials to coastal outposts where detachments of men are "guarding the coastal areas".

Another conspicuous palatial action in the Pylian archives (tablet Jn 829), records the collection of bronze from the kingdom's temple coffers. The bronze was consolidated

[209] Palaima 1991, 285-6.
[210] Palaima 1987.
[211] Deger-Jalkotzy 1978, 14
[212] Hooker 1987, 264.
[213] Palaima 1991, 286.

specifically to forge "points for spears and javelins".[214] Tablet Jn 829 clearly describes an administration that is concerned with military preparedness. Could the *er-e-ta* and *o-ka* tablets be related to these martial courses of action?

At the time of the tablet's inscription (late LH IIIB), the mainland was suffering from deteriorated trade relations and general economic decline. Under these circumstances, it is difficult to imagine Pylos summoning 600 rowers to bolster a merchant fleet. Rather, the deteriorated trade relations and general economic decline were likely coupled with increased tensions in the region, and greater susceptibility to attack. The most significant evidence for Mycenaean seafaring in the Linear B texts points to manning ships of war, not of commerce.

Shipbuilders (*na-u-do-mo*) are recognized in two fragmentary tablets recovered from Pylos (PY Vn 865, Na 568). Tablet Na 568 belongs to a series of 101 tablets, which record the tax assessments of flax on various professionals and craftsmen (including bronze smiths, hunters, and military personnel). Interspersed with the tax assessments are tax exemptions granted to specific professionals and craftsmen. The relative importance of the *na-u-do-mo* is suggested by his benefiting from the largest tax exemption offered to any of the trades.[215] The tax breaks of the *na-u-do-mo*, however, tell us nothing of the manner of ships he was building.

[214] Chadwick 1976, 141.
[215] Palaima 1991, 287.

The paucity of maritime references in the Linear B texts is perplexing, for there is little doubt that the Mycenaeans were seafarers. The muster of the rowers, coupled with references to the 'month of sailing' (*po-ro-wi-to-jo*) in the Pylos tablets suggest that the sailing season might have been underway when these tablets were inscribed.[216] Perhaps, as Palaima has suggested, the activities connected to ship construction, repair and maintenance were no longer of interest to the administration. The Pylian fleets were all in active service, deployed with the sailing season. Another possibility recognizes that the LH IIIB texts were inscribed in a period of economic decline and subsequent trade deterioration. Perhaps new ships were no longer being built, and the mere maintenance and repair of a ship would not merit an entry into the administrative record.[217]

While there is no evidence for Mycenaean seafaring outside of the Aegean, a considerable number of ship images do occur in Mycenaean iconography.[218] Nearly every Mycenaean ship representation shares a conspicuous feature, which Wachsmann calls the "horizontal ladder" motif (Figure 6).[219] Wachsmann argues convincingly that the rungs of the horizontal ladder represent stanchions supporting an open rower's gallery.[220] Every two stanchions frames one rower in a rower station.

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[216] Palaima 1991, 289.
[217] C. Shelmerdine, personal communication.
[218] Wachsmann 1998, 131-6, 155-6, figs. 7.7-8, 7.16-17, 7.19, 7.22, 7.26
[219] Wachsmann 1998, 131.
[220] Wachsmann 1998, 133.

Galleys are most commonly associated with ships of war. Not all galleys throughout antiquity, however, were warships. A depiction in Hatshepsut's mortuary temple at Deir El Bahri shows Egyptian merchant galleys en route to Punt.[221] Phoenecians shown in an Assyrian relief, fleeing the port of Tyre under the onslaught of Sennacherib (705-681), are rowing for their lives in merchant galleys.[222] The Classical and Hellenistic Greeks hauled grain cargoes in merchant galleys, most notably the *kerkouros*.[223] We should not exclude the possibility that Mycenaean galleys, like the ships painted on Late Helladic pottery, were visiting foreign shores. Perhaps some of these ships were hauling cargoes. I am reluctant, however, to assign the Mycenaeans a fleet of merchant galleys. Having no evidence yet for Mycenaean merchant ventures abroad, the galleys we see painted on Late Helladic pottery were likely fulfilling the more conventional role of oared longships—namely as ships of war.

The Cypriot

Individuals identified as *ku-pi-ri-jo* (Cypriot) in the PY tablets of Pylos are associated with sheep herding, bronze working, and various commodities including alum.[224] Quantities of oil in the Pylos Fh series are modified by the term *ku-pi-ri-jo*.[225] At Knossos the term *ku-pi-ri-jo* modifies commodities including wool, oil, honey, vases and

[221] Naville 1898, pl. 75; Wachsmann 1998, 18-32.
[222] Casson 1995, 118.
[223] Casson 1971, 163-6.
[224] Palaima 1991, 280.
[225] Palaima 1991, 293.

ingredients for unguents.[226] Additionally, a phonetic abbreviation *ku* modifies textiles at both Thebes and Knossos. Melena and Palaima have designated the modifier *ku* as "Cypriot."[227]

Palaima attributes *ku-pi-ri-jo* to individuals and commodities related to Cypriot trade.[228] His most important observations concern the quantities of oil modified by the term *ku-pi-ri-jo* in the Fh series. The association of this oil to an important economic transactional term, *o-no* (to be discussed below), suggests to Palaima that the oil is being recorded in a transaction. The modifier *ku-pi-ri-jo* addresses the destination of the oil, which is to say the tablet is recording a transaction of quantities of oil that is being exported to Cyprus.[229]

Killen has arrived at some remarkable observations building on the association of *ku-pi-ri-jo* with Cypriot trade. His hypothesis is based on Olivier's identification of *ku-pi-ri-jo* to a "collector" in the Linear B texts.[230] "Collectors" are most commonly associated with the cloth industry, and appear to be the owners and operators of a portion of the kingdom's textile workshops and herds. The remainder of the textile industry is owned directly by the palace. Separate inventories are thus kept for the management and production of the "collector" owned workshops and herds, versus the palace owned.

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[226] Palaima 1991, 281.
[227] Melena et al. 1991, 281.
[228] Palaima 1991, 281.
[229] Palaima 1991, 293-4.
[230] Olivier 1967, 71; Killen 1976, 117.

Ku-pi-ri-jo at Knossos appears in texts associated with the perfume industry.[231] Olivier draws attention to two inventories of (unguent) oil, and relates them to totaling lists in the textile industry. [232] Within the textile archives, a common ratio may be observed in the numbers of sheep and units of cloth between the "collector" and the palace, as recorded in inventories for their respective industries. The Da-Dg "sheep" records, as well as an inventory of units of cloth in the Lc (1) tablets, reveal a ratio of 30:70 "collector" owned versus palace owned sheep/units of cloth. A strikingly similar ratio may be observed in two separate inventories of (unguent) oil in the Fh series; one of which (Fh 372) is in association with *ku-pi-ri-jo*.Fh 372 records 150 units of oil. The other oil inventory (Fh 367) records 330 units of oil. The ratio between the two inventories stands at 31:69.[233] The similarity between the oil records (31:69), and the sheep and cloth records (30:70) suggests the *ku-pi-ri-jo* in Fh 372 has taken charge of the amount of oil that would be allotted for a "collector." In other words, "collectors" also exist in the perfume industry, and *ku-pi-ri-jo* is one these "collectors." The other inventory (Fh 367) records the volume of oil allotted for the palace.

This relationship becomes more compelling in light of Killen's observation of the term *o-no* introduced above, which is associated with *ku-pi-ri-jo* in Fh 372 and other Fh oil texts. Chadwick demonstrates that the term *o-no*, as it relates to Pylian land tenure texts, shares the same root as the Classical Greek "I benefit."[234] *Ku-pi-ri-jo* in Fh 372 is

[231] Killen 1995, 216.
[232] Olivier 1967, 71-93; Killen and Olivier 1968, 137.
[233] Olivier 1992.
[234] Chadwick 1964, 19-26.

therefor "benefiting" from 150 units of oil, presumably allotted to him via the palatial authority. If *ku-pi-ri-jo* is indeed a "collector," the transaction revealed in Fh 372 fits nicely within Killen's observations of "collectors" in the Knossos Ld(1) cloth tablets. The "collectors," including *ku-pi-ri-jo*, are "prominent members of the ruling elite…who have been assigned part of the productive capacity of the kingdoms for their own benefit (that share, however, still being managed on their behalf by the central authorities)."[235]

Ku-pi-ri-jo appears in the Pylos archives as well (Un 433). Interestingly, at Pylos he is also found in association with the term *o-no*.[236] Rather than (unguent) oil, *ku-pi-ri-jo* at Pylos is "benefiting from", or receiving cloth, wool, wine and figs in return for alum. Alum was an import to Pylos, as it does not occur in Messenia (the nearest source is the island of Melos).[237] Cyprus is also an important source of alum,[238]and here Killen believes it is more than mere coincidence that an individual named *ku-pi-ri-jo,* "Cypriot," is receiving cloth, wool, wine and figs from the palace, in exchange for alum.[239] Remarking on *ku-pi-ri-jo* in the Knossian Fh oil texts, Killen speculates: "it is also not inconceivable that Cyprus was one of the places to which Crete exported its perfumed olive oil."[240] It is suggested that *ku-pi-ri-jo* at both Knossos and Pylos is an individual engaged in Cypriot trade. At Knossos, in tablet Fh 372, the palace allots *ku-pi-ri-jo* 150 units of oil to be delivered to Cyprus. *Ku-pi-ri-jo* at Pylos receives cloth,

[235] Killen 1995, 214.
[236] Killen 1995, 219.
[237] Palmer 1989, 96-7.
[238] Chadwick 1964, 22-3.
[239] Killen 1995, 221.
[240] Killen 1995, 221.

wool, wine and figs from the palace, in exchange for alum that was imported from Cyprus.

Killen (following Palmer[241]) believes the wool, wine and figs in Un 433 represent a type of payment to *ku-pi-ri-jo*, rather than export goods to Cyprus. These items, he argues, particularly figs, do not appear well suited for overseas trading ventures. Killen quotes Palmer: "(the items) are not of high enough value to repay shipping costs in long distance trade."[242] He also notes how often cloth, wine and figs appear in internal transactions within the kingdoms.[243] These observations amount to *ku-pi-ri-jo* acting not as a seafaring merchant, rather as an individual operating within the palatial administration, under the rubric of a "collector." He is in the service of the palace, though appears to possess limited autonomy, and he is called "the Cypriot" for his role in organizing trade between the Mycenaean kingdoms and Cyprus. It we can accept Killen's observations, the individual titled *ku-pi-ri-jo* may provide the only sure link in the Linear B texts, to a Mycenaean mechanism of interregional trade.

Killen does not believe *ku-pi-ri-jo* to be a foreign ethnic (a Cypriot); based on his well-founded observation that *ku-pi-ri-jo* is not a merchant. His non-merchant status, however, should not exclude the possibility that a foreigner (a Cypriot) had assumed this position. A high status Cypriot may well have been integrated into the palatial

[241] Palmer 1989, 96-7.
[242] Palmer 1989, 96-7.
[243] Killen 1995, 220.

administration, whose duties and rewards were, for all intent and purposes, those of a "collector."[244]

Interestingly, Cypriots also appear to be living at Ugarit, provided we accept the Alashia/Cyprus equation. Cypro-Minoan texts have been identified at Ugarit,[245] and an extensive list of individuals in an Ugaritic archive appears to be a register of men and women living in the "town of Alashia."[246] The "town of Alashia" was likely a Cypriot quarter in Ugarit.[247] A striking parallel in the Ugaritic texts with the Mycenaean archives describes an Alashian receiving 660 units of oil.[248] Were the Alashians at Ugarit linked into an immense Cypriot trading enterprise with *ku-pi-ri-jo* in the Mycenaean Aegean?

FOREIGN MERCHANTS IN THE AEGEAN

The speculated presence of foreign enclaves in the Mycenaean world, if valid, would constitute further evidence for interregional merchant activity operating out of the Aegean. The most vocal proponent of foreign trading colonies in the Aegean is Lambrou-Phillipson, who has regenerated century old archaeological efforts to identify in the Aegean (specifically Boeotia) the Phoenician enclave led by Kadmos, from Classical tradition. Additionally, Lambrou-Phillipson has sought to validate

[244] C. Shelmerdine, personal communication.
[245] Masson 1956, Wachsmann 1998, 61.
[246] *KTU* 4.102.
[247] Rainey 1967, 90; Wachsmann 1998, 61.
[248] *KTU* 4.352.

(archaeologically) Thucydides' observation that Phoenicians and Carians had settled on several Aegean islands prior to the age of King Minos.[249]

Large quantities of exotic raw materials at Boeotian Thebes, as well as foreign technologies (an iron drill that is unique in the Aegean), and foreign craft specialization (Levantine inspired ivory carved furniture and jewelry setting) suggest to Lambrou-Phillipson that a Levantine workshop was active in Boeotian Thebes.[250] On Thera, she has identified several technological and artistic attributes supposedly unique to the Aegean. These include the use of ashlar corner stones, the application of manganese rich ochre to produce black paint, the technique of mixing glaucophane and Egyptian blue pigments for use in wall paintings, and the matte-painted technique of vase painting (polychrome vase painting).[251] She concludes: "…it is plausible that craftsmen and merchants from the Near East, perhaps in the form of an enclave colony or *paroikia*, may have lived in Akrotiri before its destruction."[252]

The grounds for Lambrou-Phillipson's enclave colony at Thebes have been carefully considered and challenged by Tournavitou. Exotic raw materials needn not belong to foreign craftsmen, and the singular iron drill may itself be, in the words of Tournavitou, "interpreted as an isolated, one-off occurrence, an innovation, unrelated to a permanent

[249] Lambrou-Phillipson 1990, 162.
[250] Lambrou-Phillipson 1990, 164.
[251] Lambrou-Phillipson 1990, 168.
[252] Lambrou-Phillipson 1990, 168.

colony of foreign craftsmen."[253] Lambrou-Phillipson's most compelling argument for a foreign workshop relates to the specialized industries identified at Thebes (jewelry setting and ivory carved furniture). Unfortunately, her foreign-inspired jewelry setting (inlaying jewelry with lapis lazuli and gold) has antecedents on the mainland from the shaft grave period onwards.[254] Also, her foreign-inspired ivory carved furniture at Thebes has exact parallels at Mycenae, and shares affinities to ivory furniture identified at other sites on the mainland, as well as at Knossos and Delos.[255]

Similarly, Cline has systematically dismissed every one of the "unique" artistic and technological attributes at Thera, by demonstrating Aegean antecedents for each.[256] He does not, however, deny the possibility of foreign populations and foreign visitors to Phylakopi, Mycenae and Tiryns. Cline has laid out ten criteria that could constitute evidence for foreign populations in the Aegean. By his reasoning, if two or more of these criteria can be met, an argument might be made for a foreign enclave.[257] For example, Cline (following Negbi) asserts sanctuaries at Phylakopi and Mycenae display prominent Canaanite architectural features,[258] thus fulfilling Cline's 7th criteria: "changes in religious architecture paralleled or inspired by foreign antecedents." This, coupled with the occurrence of numerous exotic wares found in and around Phylakopi and the Mycenae cult center (fulfilling Cline's 1st criteria: "worked foreign goods deposited as

[253] Tournavitou 1990, 418.
[254] Hood 1978, 207; Tournavitou 1990, 417.
[255] Tournavitou 1990, 418.
[256] Cline 1994, 51.
[257] Cline 1994, 53.
[258] Negbi 1988, 357; Cline 1994, 54.

votive offerings) suggests to Negbi and Cline that Syro-Palestinians were at least visiting Melos and Mycenae, if not living there.[259] Cline quotes Negbi in agreement: "The minor shrine of Phylakopi was reserved for foreign cult that was presumably practiced by Canaanite seafarers engaged in East Mediterranean trade."[260] As for Mycenae, Cline suggests that foreigners deposited the exotic objects in the cult center as votive offerings.[261]

Negbi's closest "Canaanite" architectural affinity to the temples of Phylakopi and Mycenae is not actually Canaanite, but Philistine. She uses architectural features from the temple complex at Tell Qasile (specifically the double sanctuary that is seen at Phylakopi, and the row of columns and a series of platforms that is exhibited at Mycenae) to demonstrate Near Eastern influence on the earlier temples in the Aegean.[262] Granted, the Philistines at Tell Qasile had already absorbed a great degree of Canaanite culture when they had built the temple, and the excavator of Tell Qasile asserts the temple layout has Canaanite antecedents.[263] However, to demonstrate affinities between Levantine temples and temples in the Aegean, based on a people who appear to have been fundamentally influenced by Aegean culture , has obvious difficulties. This observation considerably reduces the likelihood that Levantine architects built the temples at Phylakopi and Mycenae, and thus reduces the likelihood of foreign enclaves at the two centers.

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[259] Negbi 1988, 357; Cline 1994, 54.
[260] Negbi 1988, 357.
[261] Cline 1994, 54.
[262] Negbi 1988, 350-1.
[263] Mazar 1990, 62-8.

A far less tenuous scenario for foreign merchants (not necessarily enclaves) in the Aegean has been put forward by Hirschfeld. Her observations are based on post-firing marked Mycenaean pottery identified in the Argolid and abroad. She begins by noting that only about 200 vases out of the entire corpus of excavated Mycenaean pottery are "post-firing incised." She suggests the rarity of incised marks on Mycenaean pottery point to some "specific and directed use, i.e. a marking system."[264] The incised marks are in some way tied to Cypriot trade. Her reasoning is based on the following observations: 1) The marks that have been unequivocally identified as notation are Cypro-Minoan characters. 2) The largest quantity and variety of incised vases appear on Cyprus. 3) The practice of post-firing incising occurs widely on Cyprus on both local and imported pottery. Conversely, inscribed Mycenaean vases are rare in the Aegean.[265]

The Cypriot-inscribed Mycenaean pottery is not confined to Cyprus. The Levant has produced significant quantities, but more importantly, so has the Argolid.[266] The appearance of 24 post-firing, Cypriot inscribed Mycenaean vases in the Argolid (the vast majority at Tiryns) suggests to Hirschfeld that the vases were incised with Cypriot marks prior to their export.[267] The inconsistent patterning of the marks from vessel to vessel,

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[264] Hirschfeld 1996, 291.
[265] Hirschfeld 1993, 313.
[266] Hirschfeld 1996, 291.
[267] Hirschfeld 1996, 292. Hirschfeld denies the possibility that these were recycled (ie manufactured in the Argolid, marked at Cyprus and then returned to the Argolid), based on the fine fabric of the pottery and the sheer number of marked vases identified. The fine fabric of the pottery would likely not have survived multiple seafaring voyages. The number of marked vases in the Argolid precludes the possibility that all of the vases were accidentally returned (Hirschfeld 1996, 291-2).

which appear not to specify shape, size, fabric or decorative motif, specific context, site or geographical location, are likely idiosyncratic notation systems, which were "designations made by those who handled the merchandise."[268]

Of the two possibilities for the handlers of the merchandise (Cypriots or Mycenaeans) Hirschfeld prefers the simpler scenario, assigning Cypriots the role of marking the vases with their own script.[269] In other words, Cypriot agents may have been on Mycenaean soil, marking the pottery intended for export to Cyprus. Enter Killen's *ku-pi-ri-jo*. Killen suggests "the Cypriot" from the Linear B archives is a Mycenaean official directly concerned with affairs of Cypriot trade. I suggested earlier *ku-pi-ri-jo* might have been a Cypriot, who was integrated into the Mycenaean administration as a "collector." Was a *ku-pi-ri-jo* at Tiryns, negotiating trade with the Cypriot agents handling the marked Mycenaean pottery? Or perhaps a *ku-pi-ri-jo* was marking the pottery for export. Regardless, the combination of Killen's and Hirschfeld's observations offers the most compelling internal evidence to date for a mechanism of Mycenaean trade. It seems Cypriot merchants were on Greek soil, likely working in collaboration with an official in the Mycenaean administration who may have himself been Cypriot**.**

[268] Hirschfeld 1996, 292.
[269] Hirschfeld 1996, 293.

Leaving the Aegean, we go to Ugarit where a powerful merchant named Sinaranu, son of Siginu receives a royal dispensation.[270] In the text, which belongs to the middle or late 13th century[271] (contemporary to late LM/LH IIIB), Sinaranu's ship and cargo are exempt from taxes when he arrives from Crete.[272] Clearly, Syrian merchants had made the voyage to the Aegean.

Lastly, a remarkable inscription on a statue base of Amenhotep III in Kom el-Hetan, Egypt, coupled with several objects identified in the Aegean bearing the cartouche of Amenhotep III and his wife Queen Tiyi, have led Cline to an interesting hypothesis describing Egypto-Mycenaean relations. The statue base of Amenhotep III is inscribed with 14 place names, listing important centers in the Mycenaean Aegean (ie Knossos, Boetian Thebes, Mycenae, Troy).[273] The "Aegean List" appears to be an itinerary, as the place names follow a roughly circular pattern around the Aegean (beginning and ending with Crete).[274]

Fourteen objects associated with the reign of Amenhotep III have been identified in the Aegean (9 of the 14 at Mycenae). From Mycenae, a faience vase and faience plaques inscribed with the cartouche of Amenhotep III were recovered from LH IIIA and LH

[270] Heltzer 1988, 9, 12-3.
[271] Heltzer 1988, 9.
[272] *PRU* III 16.328.
[273] Edel 1966; Cline 1987; 1994, 38.
[274] Cline 1994, 39.

IIIB contexts respectively. Two scarabs of Queen Tiyi, Amenhotep's wife, have also been identified at Mycenae in LH IIIB contexts. [275] Cline (following Hankey [276]) has raised the possibility that these objects belonged to an official Egyptian "delegation," which visited the Aegean during the reign of Amenhotep III.[277] This voyage of 'gift exchange", according to Cline, was recorded on the "Aegean List" of Kom el-Hetan.[278]

Cline's observations raise the intriguing possibility that Pharonic ships were visiting the Mycenaean world. Our only other evidence for contact between the Mycenaeans and Egyptians comes to us from a recent interpretation of an illustrated papyrus from el Amarna, dated to the reign of Amenhotep III (corresponding to LH IIIA2). [279] The scene depicts two warriors wearing distinctly Mycenaean boars-tusk helmets and Egyptian linen kilts. These men appear to be running towards a stricken Egyptian soldier who is being attacked by Libyan archers.[280] Shofield and Parkinson suggest Mycenaean mercenaries active in the armies of Pharaoh wore the boars-tusk helmets.

Do the Amenhotep III objects recovered from the Aegean, coupled with the Kom el-Hetan "Aegean List" and the illustrated papyrus from el Amarna suggest direct trade relations between the Mycenaean citadels and Egypt? We should not exclude the

[275] Cline 1987, 8-9.
[276] Hankey 1981, 45.
[277] Cline 1990, 211.
[278] Cline 1987; 1994, 39.
[279] Schofield and Parkinson 1994, 169.
[280] Schofield and Parkinson 1994, 161-2, figs. 1-2.

possibility that Egyptian ships visited the Aegean. The evidence, however, is too circumstantial to assign regular trade relations between the two powers. The "Aegean List" betrays an Egyptian knowledge of the Mycenaean Aegean--nothing more. Objects bearing the cartouche of Amenhotep III and his wife need not necessarily be delivered by an Egyptian embassy.[281] Lastly, Mycenaean mercenaries fighting in Egypt do not describe trade relations. Until more conclusive evidence for Egypto-Mycenaean trade comes to light, I am resistant to hypotheses of regular trade between Egypt and the Mycenaean world.

In summary, the investigation of Mycenaean mechanisms of interregional trade began with evidence for Minoan merchant activity. The Minoans, it was argued, were responsible for joining the Early Mycenaeans to the greater eastern Mediterranean. Minoan merchant activity is well attested in the texts of the Near East, including the Mari tin archives and perhaps the annals of Thutmose III, if we believe the timber-bearing Keftiu ships to be Cretan. The Minoan merchant-ambassadors represented in the Theban tombs are further iconographic evidence for Cretans abroad. These representations are testament to palace-sponsored Minoan trade, and it was suggested the

[281] Lilyquist (1999, 303-4) challenges Cline's "gift exchange" designations for the plaques at Mycenae. She calls into question the ultimate worth of the faience plaques to the Egyptians. Though faience plaques bearing the cartouche of other Pharaohs certainly existed in the New Kingdom, Lilyquist finds no exact parallel for the Mycenae plaques in Egypt. The plaques at Mycenae are differentiated from the corpus in Egypt predominantly by the arrangement of their inscriptions. Until comparanda for the faience plaques in Mycenae are found in Egypt, the worth of these objects to the Egyptians can not be determined. In other words, there is no way of knowing, yet, whether these objects were valuable enough to deliver as gifts to a foreign palace. The possibility therefore remains that these objects were delivered as mere bric-a brac, as Wachsmann (1987, 113) has suggested. It follows that a non-Egyptian merchant could have delivered these objects (indirectly) to the Aegean.

elite objects of exotic manufacture identified in the early Mycenaean chiefdom burials were delivered through a similar palatial (diplomatic) mechanism.

With the collapse of Minoan enterprise, evidence for Aegean merchant activity in the eastern Mediterranean is meager at best. Ahhiyawan embassies in the Hittite archives (or more correctly, the anticipation of Ahhiyawan embassies) constitute evidence for officials abroad, who may or may not have been acting like their merchant-ambassador counterparts in the greater eastern Mediterranean. Regardless, the existence of Mycenaean embassies will become an important consideration further into the discussion.

The search for internal mechanisms of Mycenaean trade began with the Linear B archives, which have long been silent on issues related to trade. The most important texts related to seafaring, the "rowers tablets," probably describe martial rather than merchant behavior. Recent interpretations by Killen, however, have introduced the possibility of an official titled *ku-pi-ri-jo* (the Cypriot) acting as a palatial trading agent. In this scenario, *ku-pi-ri-jo* was responsible for organizing trade between the Mycenaean palaces and Cyprus.

Further hypotheses for internal mechanisms of Mycenaean trade do not concern Mycenaeans, rather the presence of foreign merchants (or foreign enclaves) in the Aegean. Lambrou-Phillipson's efforts to archaeologically substantiate Classical myth

and the observations of Classical historians, by identifying Syro-Palestinian enclaves at both Boeotian Thebes and Thera are untenable. Additional scenarios proposed by Cline and Negbi for foreign enclaves or merchants at Phylakopi and Mycenae are tenuous at best. The most substantial archaeological evidence for foreign merchants in the Aegean has been put forward by Hirschfeld. The occurrence of Cypro-Minoan marked Mycenaean pottery in the Argolid (predominantly at Tiryns) is highly suggestive of Cypriot agents marking the pottery in the Aegean, prior to export. Her observations, coupled with Killen's *ku-pi-ri-jo*, are compelling indicators of a mechanism of trade that existed between Cyprus and the Mycenaean Aegean. The actors in this trading mechanism were Cypriot.

A royal dispensation for the Ugaritic merchant Sinaranu, Son of Siginu, exempting him from taxes on his return from Crete, is the least ambiguous evidence for foreigners visiting the Mycenaean Aegean. The possibility that Egyptian ships were sailing to the Aegean during the reign of Amenhotep III was raised by Cline. By relating the "Aegean List" inscribed into a statue base of Amenhotep III, with numerous objects identified in the Mycenaean Aegean bearing the cartouche of Amenhotep III and his wife Queen Tiyi, Cline has established direct relations between the two powers. We should not exclude the possibility that Egyptian ships sailed to the Mycenaean Aegean. Perhaps the keftiu ships at *Prw nfr* were being built (rather than repaired) for Egyptians en route to the Aegean. Cline's evidence, though, is largely circumstantial, and can not, by itself, support a hypothesis for Egypto-Mycenaean trade relations.

CHAPTER V

THE AGENCY OF BRONZE AGE SEAFARING TRADE

Chapter IV highlighted an internal mechanism of trade in the Mycenaean Aegean. An official organizing trade between the Mycenaean palaces and Cyprus was probably in collaboration with Cypriot agents who were marking Mycenaean pottery in the Aegean for export. The existence of direct trade relations between the Mycenaean Aegean and Cyprus has been axiomatic in Late Bronze Age scholarship for nearly half a century. This archaeological tenet is founded on the enormous quantities of Mycenaean pottery that occur on Cyprus (more than in Syro-Palestine and Egypt combined[282]).

Early scholars of interregional trade conceived of a Mycenaean thalassocracy to account for the quantities of Mycenaean ceramics on Cyprus and in the greater Levant. The hypothesis was spawned out of tombs occurring in and around Ras Shamra-Ugarit, which were misidentified as Mycenaean.[283] These barrel vaulted tombs provided evidence for a Mycenaean trading colony at Ras Shamra-Ugarit,[284] and would account for Mycenaean merchant ships sailing to Cyprus, and along the coasts of Syro-Palestine and Egypt.[285] Unfortunately, the barrel vaulted tombs were demonstrated to have Near

[282] Catling 1964, 38.
[283] Schaeffer 1939, 72-97.
[284] Immerwahr 1960, 12.
[285] Åström 1973 122-7; see also Courtois and Courtois 1978, 292-363; Catling 1964, 49-50, 54, 300-1.

Eastern antecedents.[286] Regardless, the notion persisted of a powerful Mycenaean merchant fleet replacing the Minoan one.[287]

Sasson and Bass voiced the first resolute challenges to Mycenaean pre-eminence in the affairs of interregional trade. One year prior to Bass' publication of the Cape Gelidonya shipwreck, Sasson countered scenarios of Mycenaean thalassocracy with "definite proofs of a Canaanite thalassocracy."[288] The Canaanite ships represented in the tomb of Kenamun at Thebes,[289] as well as the numerous maritime references in the Ugaritic archives,[290] were to Sasson irrefutable evidence for Canaanite pre-eminence in seafaring trade. Sasson was well aware of Bass' earlier hypothesis on the origin of the Cape Gelidonya ship, and accepted it uncritically.[291] Bass' 1967 publication of the Cape Gelidonya shipwreck, and his assertion that the crew of the ship was Syrian,[292]prompted Bass to refute any scenario claiming Mycenaean pre-eminence in maritime trade.[293]

The Cape Gelidonya shipwreck also revealed the cargo and personal effects of a late 13th or early 12th century itinerant merchant.[294] One year after this landmark publication, Merrillees introduced the concept of an "independent entrepreneur" to account for

[286] Yannai 1983, 53.
[287] Catling 1964, 53-4.
[288] Sasson 1966, 128.
[289] Sasson 1966, 128-9.
[290] Sasson 1966, 132-5.
[291] Sasson 1966, 129.
[292] Bass 1967, 165. It should be noted that Bass (1973, 36) later allowed for a possible Cypriot origin for the Cape Gelidonya merchantman.
[293] Bass 1967, 165.
[294] Bass 1967, 163.

Aegean ceramic distributions in Syro-Palestine and Egypt. Though Merrillees did not include the evidence of Cape Gelidonya's itinerant merchant in his 1968 publication, his later writings would site the merchant(s) on board the Cape Gelidonya ship as evidence for private entrepreneurial trade.[295] His arguments were the next great challenge to Mycenaean pre-eminence in seafaring trade, and the first substantial attack against the concept of Bronze Age thalassocracies.[296] Both The Cape Gelidonya shipwreck and Merrillees' private entrepreneurs will be discussed in greater detail below.

Merrillees' approach was continued in the works of Knapp,Yannai, and Sherratt respectively. Knapp's vigorous critique of Bronze Age thalassocracies, which he describes as an anachronistic concept based primarily on the "Classical worldview of nautical activities,"[297] is perhaps the coup de grace to concepts of military and economic maritime supremacy in the Bronze Age eastern Mediterranean. Similarly, Yannai and Sherratt's analyses of trade relations between the Mycenaean Aegean and Levant (both to be discussed below) have continued to undermine the plausibility of Mycenaean pre-eminence in seafaring trade.[298] Their theses describe the fundamental role assumed by Cypriot private merchants in Bronze Age trade.

Observations on the role of private enterprise have had the greatest impact on our current understanding of Mycenaean interregional trade. The discussion, therefore, will begin

[295] Merrillees 1974, 8; Kemp and Merrillees 1980, 278.
[296] Merrillees 1974, 7.
[297] Knapp 1993, 333.
[298] Yannai 1983, 103-4;see also Sherratt 1999.

with models of commercial seafaring in the Bronze Age Mediterranean. While the proposed commercial sphere has posted a direct challenge to the concepts of thalassocracies in general, and Mycenaean pre-eminence in particular, its existence should not reduce the role or importance of palace sponsorship in interregional trade. The chapter will conclude with a discussion of palatial "gift exchange."

PRIVATE SEAFARING MERCHANTS

Renfrew divides the concept of an "independent entrepreneur" into two classes. One operates within the realm of "freelance commercial trade." The other is confined to "directional commercial trade." Several conditions are to be met for an agent to be considered a "freelance commercial" merchant.[299] First, his cargo should not consist of objects of high prestige. Second, his wares should be highly saleable and have a wide appeal. Third, he is normally a middleman, though in some cases he may himself be the producer. Lastly, there is no obligation for the merchant to trade regularly with the same people or institutions, which coincides with his goods being distributed widely within his radius of movement.

Braudel has coined this merchant activity "tramping." The eloquence and imagery of Braudel, as he describes tramping in the 4th century B.C., compliments Renfrew's theoretical model of the freelance commercial merchant:

[299] Renfrew 1972, 465-71.

> Tramping also made it possible to take on cargo. It gave ample opportunity for bargaining, and for making the most of price differences. Every sailor from captain to cabin boy would have his bundle of merchandise on board, and merchants or their representatives would travel with their wares. The round trip, which could last several weeks or months, was a long succession of selling, buying and exchanging, organized within a complicated itinerary. In the course of the voyage, the cargo would often have completely altered its nature.Amid the buying and selling, care was always taken to call at some port…(These ships) were more like travelling bazaars. The calls at port were so many opportunities for buying, selling, reselling and exchanging goods, not to mention the other pleasures of going ashore.[300]

The late 13th century Cape Gelidonya shipwreck likely belongs to this class of merchant. Bass describes the Cape Gelidonya merchant(s) as "prepared to trade in almost any eastern Mediterranean port."[301] The diversity of types of pan balance weights recovered from the Cape Gelidonya shipwreck, and their wide distribution across the eastern Mediterranean, allowed the Cape Gelidonya merchant to trade with his counterparts in

[300] Braudel 1966, 107.
[301] Bass 1967, 163.

Egypt, Syro-Palestine, Cyprus, the Hittite empire, and the Aegean.[302] All implements of bronze manufacture were on board the ship when it sank, and Bass argues convincingly that the merchant not only traded in metals, but also worked them himself.[303] Much of the metal in the cargo was scrap, and we can imagine him anchored in port, procuring scrap metal to either sell further down the line, or recast into saleable merchandise. Lastly, it is worth noting that nothing of elite manufacture is represented in the ship's cargo.[304]

Muhly is the most explicit in declaring the Cape Gelidonya ship a freelancing merchantman. He has persistently challenged Bass' hypothesis that the Cape Gelidonya ship was sailed by a Syrian or possibly Cypriot crew.[305] Originally Muhly believed the Cape Gelidonya ship to be Mycenaean,[306] though quickly recanted and perceived the ethnic diversity of the pan-balance weights, seals, scarabs and pottery recovered from the shipwreck, as indicative of an "international" origin for the merchants.[307] The "international" origin of the crew presumably highlighted the freedom the ship possessed to move about in the eastern Mediterranean, as the crew held no allegiance or duty to any palace or power.

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[302] Bass 1967, 142.
[303] Bass 1967, 163.
[304] Bass 1967, 163-7.
[305] Bass 1967, 164 (for Syrian origin); 1973, 36-7 (for possible Cypriot origin).
[306] Muhly 1972, 212.
[307] Muhly et. al 1977, 361-2.

Muhly argues the Cape Gelidonya merchant was a middleman, procuring raw metal in the form of ingots from its producers on Cyprus and elsewhere, and delivering the metal around the eastern Mediterranean. He agrees with Bass that the ship represents an itinerant merchant, buying and selling material wherever possible.[308] Muhly concludes that the Cape Gelidonya ship has "contributed significantly to our understanding of ancient trading mechanisms by showing the existence of private merchants operating in an international milieu."[309]

Merrillees agrees with Muhly's conclusions that the Cape Gelidonya ship carried an "international" crew that was engaged in private enterprise.[310] Bass does not explicitly assert it was a private or state-sponsored voyage, and does not refute the "private entrepreneurial" conclusions reached by Muhly and Merrillees. Note that Bass' Syrian or Cypriot origin for the crew would not be inconsistent with a "privately owned" merchant ship, contra Knapp and Cherry.[311]

The Cape Gelidonya merchant thus fits well within Renfrew's construct of a "freelance commercial trader." His merchandise is humble. His wares, primarily metal, have a wide appeal. He acts as both middleman and producer. His itinerary is not fixed to a particular region, as is evidenced in the diversity of the pan-balance weights. Lastly, we can imagine him in the lyrical world of Braudel, "tramping" the eastern Mediterranean.

[308] Bass 1967, 163; Muhly et al. 1977, 361.
[309] Muhly et al. 1977, 362.
[310] Kemp and Merrillees 1980, 278
[311] Knapp and Cherry 1994, 144.

Merrillees' observations of imported pottery in the greater eastern Mediterranean give further heed to the existence of Bronze Age entrepreneurial seafarers. His model continues to describe scenarios of "freelance commercial" trade (as opposed to "directional commercial" trade which will be discussed below). Merrillees seeks to explain two conspicuous phenomena relating to Aegean trade with Cyprus, Syro-Palestine, and Egypt. The first concerns the appearance of Cypriot/Syro-Palestinian vessels together with Aegean in modest 18th Dynasty burial contexts at Saqqara.[312] The second observation relates to the same Aegean pottery in Egypt, coupled with Egyptian wares identified in the Aegean. Both the Aegean and Egyptian wares belong exclusively to types identified in Syro-Palestine.[313] In a decisive critique of the Bronze Age "thalassocracy," which dominated early models of interregional trade, Merrillees asks if there is any compelling historical need to suggest trade was a two-way affair. He flatly declares there is not, and adds:

> We have grown so accustomed to assertions of Minoan and Mycenaean thalassocracies, Syrian commercial monopolies and Egyptian hegemony over the high seas—as though each scholar conceived of his area of specialization exclusively in terms of a mercantile empire, and we are so used to thinking of trade as an exercise in balance of payments—that the only reasonable

[312] Merrillees 1968, 195
[313] Kemp and Merrillees 1980, 283-4.

explanation appears to have been largely overlooked.[314]

Merrillees' "reasonable explanation" for the above phenomena lies in Syro-Palestinian (or Cypriot) middlemen, who were acting as "independent entrepreneurs," delivering the Egyptian wares to the Aegean, and returning to the eastern Mediterranean with their holds filled with Aegean commerce.[315]

Cline and Yannai, on the other hand, have offered models of "directional commercial trade" to account for the distribution of imported wares in the Aegean and eastern Mediterranean. The merchandise of "directional commercial" trade is similar to that of "freelance trade." The cargo consists primarily of raw materials and low cost, high demand manufactured goods. The principle difference between the two mechanisms is that directional trade occurs on a regular itinerary. Consequently, evidence for commerce will be restricted to specific sites. It is important to note that this class of merchant does not have to operate under the direct control either of the exporter or importer. A "directional commercial" merchant, like his freelance counterpart, may also be a middleman. [316]

Cline has observed the concentration of non-Aegean imports in the major palatial centers of Mycenae, Tiryns, Knossos, Kommos, Kato Zakro and Ialysos, as evidence that these were "specific points of entry." The non-Aegean wares and resources would then be

[314] Merrillees 1974, 7.
[315] Kemp and Merrillees 1980, 283-4.
[316] Renfrew 1972, 470-1.

redistributed to other centers and lesser communities in the Aegean.[317] Cline asserts that the majority of the objects imported into the Late Bronze Age Aegean arrived via "directional commercial" trade.[318]

His hypothesis goes one step further by arguing that specific polities in the Aegean maintained trade relationships with specific eastern Mediterranean powers. The concentration of Cypriot ceramics at Tiryns, and the relative dearth of Egyptian wares, suggests Tiryns had established trade relations with Cyprus and not Egypt. Conversely, the abundance of Egyptian objects at Mycenae, and the far fewer Cypriot wares suggest to Cline that Mycenae had entered into trade with Egypt and not Cyprus. Additionally, he cites the *ku-pi-ri-jo*-modified materials in the Knossian texts (after Palaima and Melena), as evidence for direct trade relations between Knossos and Cyprus.[319]

Following Killen, we may add a third palace engaged in Cypriot trade. *Ku-pi-ri jo* at Pylos (and Knossos) was organizing trade between Cyprus and the Aegean. Three Mycenaean palace centers engaged in Cypriot trade is hardly indicative of the palace-specific trade relations Cline is suggesting. Further, the possibility that Tiryns existed as a subsidiary of Mycenae, serving as its coastal emporium, reduces the likelihood that Mycenae and Tiryns held mutually exclusive trade relations.[320]

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[317] Cline 1994, 86-7.
[318] Cline 1994, 86.
[319] Cline 1994, 87.
[320] I agree with Dickinson (1994, 14, 78) that the close proxitmity of Mycenae and Tiryns (only 15 km apart) makes it unlikely that they ruled two autonomous kingdoms.

Regardless, Cline's observations of Mycenaean "gateway communities" operating as the redistribution centers of the Mycenaean world are valid, and do suggest direct trade. Cline concludes that the vast majority of the exotic materials and objects in the Aegean were delivered via a mechanism of "direct commercial trade." "Trampers" delivered a much smaller percentage, and fewer still were carried by diplomatic voyages of "gift exchange."[321]

Cline refuses to assign the burden of Aegean seafaring commerce to any one people. He asserts: "the evidence does not favor one nationality of merchants over the others during the 14th to mid 11th centuries BC; rather, Syro-Palestinians, Egyptians, Cypriots, Italians, Minoans, and Mycenaeans all appear to have been active participants, in terms of supplying both men and ships to the international maritime trade routes…"[322] Cline makes the error of equating the occurrence of exotic objects in the Aegean to the ethnic identity of the merchants who brought them there.[323] In other words, since objects from all over the Mediterranean are appearing in the Aegean, merchants from all over the Mediterranean are visiting the Aegean.

The diversity of the cargo and personal effects on board the Uluburun ship, including objects from Syro-Palestine, the Mycenaean Aegean, Cyprus, Egypt, Nubia, the Balkans, Mesopotamia and perhaps Sicily,[324] should have prevented Cline from identifying the

[321] Cline 1994, 87.
[322] Cline 1994, 93.
[323] Cline 1994, 92.
[324] Pulak 1997, 266.

'nationality" of the merchants, by the wares that they were delivering. Additionally, the only evidence he provides for Mycenaean sponsored merchant ventures is in the observation that the Mycenaeans were in possession of seafaring ships,[325] and in the tired argument that the abundance of exported Mycenaean pottery in the eastern Mediterranean is evidence for Mycenaean merchant activity there.[326]

Yannai has presented the most compelling argument for seafaring merchants operating within a system of "directional commercial" trade. Echoing Merrillees, she asserts profit-motivated entrepreneurs acted as middlemen in trade between the Mycenaean Aegean and greater Levant.[327] Where Merrillees permits the middlemen to be of Cypriot or Syro-Canaanite origin, Yannai isolates the Cypriots as the movers of commerce between the two regions.[328] Yannai goes one step further, however, in describing in detail the markets that existed in the Late Bronze Age eastern Mediterranean. The Late Bronze Age Cypriot merchants were entrepreneurs operating in a virtual *laissez faire* market system. Her hypothesis is based primarily on the distribution of Mycenaean pottery in Cyprus and the Levant, the role of Cyprus as a copper producer, and the minimal impression Mycenaean culture seems to have made on the greater Levant. [329]

[325] Cline 1994, 91. Cline bases this observation on the corpus of Mycenaean ship iconography. I argued in Chapter IV that the Mycenaean ship representations more likely represent war galleys rather than ships of commerce.
[326] Cline 1994, 92.
[327] Yannai 1983, 103-4.
[328] Yannai 1983, 104.
[329] Yannai 1983, 103-4.

Yannai describes Cypriot entrepreneurs capitalizing on a taste for Mycenaean pottery on Cyprus and in Syro-Palestine, as well as on a Mycenaean demand for Cypriot copper. In this scenario, Cypriot merchants had already established markets in Syro-Palestine for Cypriot pottery, prior to the appearance of Mycenaean pottery in the east. The arrival of LH IIIA2 wares to Cyprus caused a sensation, which had reverberations in the greater Levant. Cypriot merchants then flooded Cyprus with the immensely popular LH IIIA2-IIIB wares. The Mycenaean pottery that could not be absorbed by Cypriot markets was then shipped to previously established markets in Syro-Palestine and Egypt.[330] Presumably, Cypriot merchant ships set sail for the Aegean with Cypriot copper and Levantine and Egyptian resources (and some wares). These ships then returned with their holds filled with Mycenaean ceramics, perhaps some raw materials, though little else of Mycenaean manufacture.

Yannai repeats an observation first made by Kantor,[331] and later by Bass in reference to the Cape Gelidonya merchantman.[332] The disparity between the large quantity of Mycenaean ceramics in the Near East, versus the relatively few Near Eastern objects in the Mycenaean Aegean, is the result of a westbound trade in invisible commodities such as Cypriot raw metal, and the eastbound trade in ceramics. Cypriot control of this trade accounts for the dearth of evidence for Mycenaean merchant activity, and the minimal cultural impression left on the Levant by Mycenaean civilization.

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[330] Yannai 1983, 94
[331] Kantor 1947, 19; Yannai 1983.
[332] Bass 1967, 165.

Lastly, S. Sherratt describes a trend of increasing decentralization in Bronze Age interregional trade.[333] Throughout the third and early second millenium, interregional trade occurred almost exclusively as communication between palatial elites (see "gift exchange" discussion below). With the beginning of the Late Bronze Age, however, as export economies were growing and becoming more diversified, elements of trade had seeped beyond palatial control. This is manifested most clearly in the increasing export of pottery, like the Mycenaean ceramics that inundated the Near East. These wares of inherent mass appeal and low value (which never appear in documents describing palace sponsored trade), were delivered with the intention of making profit.[334] Sherratt (following Hirschfeld[335]) identifies the profit seeking carriers of the Mycenaean pottery by the Cypriot marked handles already discussed.[336] Entrepreneurial Cypriot merchants, it is argued, were arriving to the Mycenaean Aegean.

GIFT EXCHANGE AS PALACE-SPONSORED TRADE

Clearly, private trade existed alongside palace-sponsored trade in the eastern Mediterranean. We should think of the mechanisms of Bronze Age exchange as complex and interweaving networks including both the private and palatial sectors.[337] The ambiguities of sponsorship (private vs. palatial) become explicit when we consider

[333] Sherratt 1999.
[334] Sherratt 1999, 178-9.
[335] Hirschfeld 1996.
[336] Sherratt 1999, 183; See supra pp. 68-9.
[337] Sherratt and Sherratt 1991; Knapp 1993; Knapp and Cherry 1994.

the position of the most well documented merchants of the Bronze Age, namely the merchants of the Old Assyrian and Ugaritic texts.

The *tamkaram* of the Old Assyrian texts was the central figure of an immense Babylonian trading enterprise.[338] He was a traveling merchant and financed trading expeditions. He was both broker and moneylender.[339] His integration into the palatial administration however, fluctuated with kingship. An exceptionally prosperous period during the reigns of Warad-Sin and Rim-Sin gave *tamkaram* complete autonomy to pursue trade and profit. *Tamkaram* enjoyed private enterprise in this period and grew extraordinarily wealthy.[340] Under the reforms of Hammurabi, however, much of the wealth and status of the *tamkaram* was stripped. He had become a servant of the state, though was able to maintain some degree of private enterprise. Here he acted as both palatial trade agent and entrepreneur.[341]

A similar ambiguity exists for the powerful merchant class of Ugarit—the *mkrm* or sometimes *bdlm*. The Ugaritic texts describe these wealthy merchants operating in palatial import and export, bronze ware manufacture, and textiles, just to name a few.[342] Astour, in his concluding remarks on the position of the "big merchant" in Ugaritic society, notes:

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[338] Leemans 1950, 4.
[339] Leemans 1950, 36
[340] Leemans 1950, 113.
[341] Leemans 1950, 119-25.
[342] Astour 1972, 26.

> The question, already debated with respect of the Babylonian merchants: were they primarily state agents, or free entrepreneurs, equally applies to their Ugaritic counterparts; and in both cases no clear cut answer can be given owing to the peculiar nature of the relationship between the private and the royal sectors in the Near Eastern society of the second millenium.[343]

The ambiguous nature of these well represented merchants of the Bronze Age, perhaps should have dissuaded Yannai and Sherratt from describing the Cypriot carriers of Mycenaean ceramics exclusively in entrepreneurial terms. Zaccagnini reminds us that privately sponsored merchants and palatial traders may have simultaneously operated on behalf of Bronze Age palaces.[344] Fortunately, we can discuss a mechanism of trade that includes non-commercial or political elements, thus placing it squarely within the realm of palace sponsorship.

In Chapter III the concept of a "merchant-ambassador" was introduced to identify the Minoans bearing gifts in the 18th Dynasty Theban tombs. This identification was based on passages in the Amarna Letters, which used the terms "messenger" and "merchant" interchangeably. The dichotomy expressed in these individuals, as part trader and part

[343] Astour 1972, 26.
[344] Zaccagnini 1987, 57.

palace representative, assigns them as deliverers of commodities on behalf of their palace.

The concept of "gift exchange", as revealed in the Amarna Letters, is fundamental to the discussion of palace-sponsored trade. In simplest terms, "gift exchange" is a gesture made between political equals enacted to perpetuate a relationship of reciprocity and further gift giving.[345] This gesture was occurring at the highest echelons of politics and society in the Late Bronze Age. Many of the commodities circulating in gift exchange were necessarily prestige items, or objects and materials of high intrinsic and cultural value.

The gesture of "gift exchange" entered a palace into trade relations with other palaces. The gesture itself, however, should not be viewed as trade in the traditional sense of the word. Trade is commonly described as a behavior, whereby parties are entering into transactions with the goal of maximizing economic advantage. Liverani has made some important observations, which would suggest the transactions of "gift exchange" did not necessarily follow this "market" philosophy, drawing scholarship's attention to the economically irrational elements of gift giving in the Amarna Tablets.

A correspondence between the King of Alashiya (Cyprus) and Pharaoh relates the Alasiyan king delivering a gift of ivory to Pharaoh. In this same letter, the King of

[345] Knapp and Cherry 1994, 146.

Alahsiya requests a shipment of Egyptian ivory, which is of course coveted by the Alashiyan king, as ivory does not occur naturally on Alashiya. Liverani recognizes two irrational elements in this transaction. The first concerns the great economic cost of delivering this ivory to Pharaoh, so that it may be replaced by another shipment of ivory from Egypt. Clearly the Alashiyan king is gaining no economic advantage in this transaction. The second irrational element includes, in the words of Liverani," (the) anti-economical nature of exporting ivory from Cyprus, which does not produce it, to Egypt which by virtue of having access to the vast African reserves is the privileged exporter of this material..."[346]

Liverani maintains that Late Bronze Age "gift exchange" was a gesture that occurred on multiple levels.[347] The irrational elements in the Amarna transactions describe palatial behavior that transcended economic motivation, to insure friendly relations with the counterparts of the palace. The Alashiyan king releases his rare and precious ivory to Pharaoh, in a sense ceremoniously entrusting Pharaoh to this delivery. Pharaoh is flattered by this extraordinary trust, and returns larger quantities of ivory to the Alashiyan king. Ultimately, Liverani reminds us, this is rational behavior as it seeks to maintain friendly relations with other palaces, and thereby insures the flow of raw materials, processed resources, and manufactured objects that can only be obtained through trade.[348]

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[346] Liverani 1979, 22-3.
[347] Liverani 1979, 22.
[348] Liverani 1979, 24.

Transactions including metal, particularly silver, copper and tin, are examples of economic or rationally motivated palatial transactions.[349] Shekels of silver are used as currency, and it is the medium of silver that often reminds the "gift exchange" partner how much is owed. In one example the king of Ugarit delivers a valuable mare to Karkemesh, and demands of a Karkemesh functionary 200 shekels of silver in return.[350] Copper and tin are used similarly. In a letter from a prefect of Qadesh to the king of Ugarit, there is a dispute over a delivery of copper and tin from Ugarit to Qadesh, which was exchanged for pack animals.[351]

Liverani makes another interesting observation concerning the "payment demanding" transactions in the palatial correspondences. These correspondences almost never occur between kings. The undignified demands of payment occur in the correspondences between a king and a lesser functionary, or between functionaries alone. We can envision the dialogue between kings, as an elevated discourse that was carried within the ceremonial realm of "gift exchange".[352]

One delivery of gifts, therefore, can represent a gesture on two discrete levels. The objects of elite manufacture (e.g. rhytons or ivory carvings) belong to the personal and

[349] Gold is more often than not seen in the irrational elements of Amarna "gift exchange". For example, in a list of gifts sent from Babylon to Egypt (EA 13) the king of Babylon sends Pharaoh gold and ebony, which are resources normally delivered from Egypt (Liverani 1979, 28).
[350] Liverani 1979, 29.
[351] Liverani 1979, 29.
[352] Liverani 1979, 29-30.

ceremonial. This level of correspondence seeks to insure friendly intra-palatial relations and maintains the flow of interregional trade. Returning to Renfrew's models of Bronze Age trade, these objects are delivered in what he has coined "the prestige chain" of ceremonial gift exchange. Renfrew lists four attributes that characterize "prestige chain" trade. 1) The exchange takes place between specific notable persons. 2) The commodities are frequently handed on in subsequent exchanges. 3) Such goods are not expended or utilized in daily life. 4) Prestige chain" commodities appear in the archaeological record as the result of deliberate burial, or through accidental loss.[353]

Conversely, the lower level or "rational" correspondence involves the exchange of currency, metals, (common) raw materials, processed resources, animals and non-elite objects of manufacture. This correspondence is economically motivated, and fits into the traditional concept of trade as a behavior that seeks to maximize economic advantage. Liverani's economically motivated trade is synonymous with Renfrew's models of "commercial trade" discussed earlier in this chapter.

Additionally, Renfrew's observations on the Late Bronze Age metals trade mirror Liverani's model of multi-layered "gift exchange." Renfrew argues that metal was circulated in commercial trade, though he suggests that "formalities were arranged in terms of gift exchange, masking the commercial nature of the transactions."[354] In other

[353] Renfrew 1972, 467.
[354] Renfrew 1972, 472.

words, a delivery of metal will include the "commercial" commodity of metal. It will also include the "prestige chain" objects that mask as "gift exchange," the commercial nature of the transaction. These observations on "gift exchange" and palatial trade in the Amarna Letters find compelling parallels in the cargo of the Uluburun ship, which will be discussed in chapter VI.

To conclude, perceptions of interregional trade have shifted considerably since Helene Kantor, writing in 1947 was able to assert, "…only the sailors, merchants, and craftsmen of Mycenaean Greece can justifiably lay claim to the honor of forming the links connecting the Aegean with the Orient."[355]

Bass and Merrillees voiced the two most important challenges to this "hellenocentric" paradigm. Bass's excavation and publication of the Cape Gelidonya shipwreck introduced scholarship to its first Late Bronze Age merchant ship, which was clearly not Mycenaean. Merrillees introduced the concept of private enterprise to Bronze Age seafaring and subsequently undermined anachronistic notions of Bronze Age thalassocracies. His hypothetical Syro-Palestinian or Cypriot entrepreneurial middlemen continued to challenge notions of Mycenaean pre-eminence in seafaring trade. I agree with the prevailing opinion that the cargo and personal effects of the Cape Gelidonya ship are evidence for entrepreneurial seafaring merchants in the Late Bronze Age.

[355] Kantor 1947, 103.

The role of the private entrepreneur in Bronze Age seafaring trade has been increasingly recognized, and manifested to its extreme in the work of Yannai. Yannai's model of trade relations between the Mycenaean Aegean and the Levant recognizes only Cypriot private entrepreneurial merchants uniting the two regions in trade. Her arguments are useful in demonstrating Cyprus' importance in these trade relations, though the exclusively entrepreneurial models put forth by Yannai and (Sherratt) should be viewed with some skepticism.

A more moderate "commercial" model has been put forward by Cline, who places "directional commercial" trade as the foremost mechanism of trade between the Aegean and the rest of the eastern Mediterranean. Cline allows for palace-sponsored voyages of diplomacy (gift exchange) to account for a smaller volume of trade to the Mycenaean Aegean.

Cline's model becomes problematic when he attributes the "nationality" of a merchant to the wares he is delivering. He suggests that the appearance of Egyptian, Cypriot, Syro-Palestinian, and Italian wares in the Aegean, is evidence for merchants from these regions visiting the Aegean. Similarly, Cline attributes the Mycenaean wares that appear on Cyprus, Syro-Palestine and Egypt, to Mycenaean merchant activity in these areas. The regional diversity of the objects on board the Uluburun ship, including wares and personal effects from Syro-Palestine, the Mycenaean Aegean, Cyprus, Egypt, Nubia, the

Balkans, Mesopotamia and Sicily, clearly demonstrate the difficulty in Cline's reasoning.

The recognition of an entrepreneurial sphere in Bronze Age seafaring should not reduce the role or importance of palace-sponsored trade, though Sherratt argues convincingly that exchange was becoming increasingly profit motivated through the Late Bronze Age. Palace-sponsored trade is most clearly manifested in the records of "gift exchange" in the Amarna Letters. Liverani's model of Late Bronze Age "gift exchange" in the Amarna Letters describes two levels of trading activity. The lower level equates to Renfrew's "commercial trade" which circulates non-precious metals, non-elite objects of manufacture, animals and processed resources. Commercial goods are delivered with the intention of gaining some economic advantage from the recipient. The higher level of "gift exchange" is a political rather than an economic gesture. Wares circulating at this level equate to Renfrew's "prestige chain" objects. Objects of elite manufacture (or raw materials of exceptional worth) are delivered with the sole intention of maintaining healthy relations with the recipient. Wares from both the economic (commercial) and political (elite) realms can, therefore, constitute one delivery of "gift exchange." This dichotomy is observed in the cargo of the Uluburun ship, to which we now turn.

CHAPTER VI

THE CARGO AND MEN OF THE ULUBURUN SHIP: A REVIEW OF THE SHIPWRECK DATA

Roughly 19 Aegean transport vessels have been recovered from the shipwreck (18 stirrup jars and 1 flask) (Table 1).[356] The Aegean pottery will be discussed in greater detail below. Significantly, the volume of Aegean transport vessels is paltry compared to the large haul of Cypriot and Syro-Palestinian pithoi, jars and amphoras.[357] We should expect more Aegean cargo than Near Eastern if the ship had just left the Aegean, and was sailing east. Consequently, the Aegean transport vessels were likely in recirculation when they sank with the Uluburun ship.

Conversely, nine large Cypriot pithoi filled with oil, pomegranates, and Cypriot pottery,[358] as well as 10 tons of copper mined from the Apliki region of northwestern Cyprus,[359] suggests a Cypriot emporium was the last port of call. From Cyprus, the ship proceeded to sail west (Figure 1).[360]

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[356] I am grateful for communication with Jeremy Rutter, who has allowed me to read and reference his yet un-published manuscripts on the Mycenaean pottery recovered from the Uluburun shipwreck. All observations on the Mycenaean pottery were taken from this personal correspondence.
[357] Pulak 1998
[358] Pulak 2001,40-1.
[359] Stos-Gale et al. 1998, 119.
[360] The roughly 150 Canaanite jars of terebinth resin (Pulak 2001, 33; Hairfield and Hairfield 1990, 41A-45A), and olives and glass beads (Pulak 1998, 201) were likely hauled aboard at a Syro-Palestinian port. Pulak introduces the possibility (personal communication) that the Cypriot commodities may have been delivered first to a prominent Syro-Palestinian emporium (Ugarit), where they were then laden onto the Uluburun ship. The simpler explanation, however, has the Uluburun ship visiting ports at both Syro-Palestine and Cyprus.

An Aegean destination has been substantiated by Cline's observation of the ship's cargo. In Cline's words, "the breakdown (by percentage) of the Uluburun shipwreck's worked cargo, in terms of country of origins, presents a remarkable similarity to the breakdown (by percentage) of the worked Orientalia found in LH/LM IIIA and IIIB contexts within the Aegean area."[361] In other words, we are witnessing on board the Uluburun ship an important mechanism of trade between the Mycenaean Aegean and the rest of the eastern Mediterranean.

Liverani and Renfrew's models of "gift exchange" share remarkable parallels to the cargo of the Uluburun ship. The Amarna Letters reveal explicitly that metals, particularly copper, were delivered in great quantities as "gifts" between Late Bronze Age kings. In one correspondence between the king of Alashia and Pharaoh, the Alasiyan king apologizes for having sent only 500 talents of copper (probably 500 copper ingots) to Pharaoh.[362] In another, we learn that Pharaoh had requested 200 talents of copper (probably 200 ingots) from the Alasiyan king.[363] These exchanges of non-precious metals demonstrate Liverani's economic correspondence, or Renfrew's "commercial" trade.

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[361] Cline 1994, 100, figs. 20-2.
[362] *EA* 35, 10-15.
[363] *EA* 34. 9-18.

The Uluburun shipwreck has produced the largest cache of copper and tin ingots from the Bronze Age Mediterranean.[364] No less than 354 copper oxhide ingots weighing approximately 10 tons[365], and 121 smaller bun (or plano-convex) shaped ingots weighing about three quarters of a ton, have been identified on the shipwreck.[366] The total number of tin ingots (mostly oxhide) can not be counted in number, as the majority of the ingots (with the exception of 3) were cut into quarters and halves.[367] Many of the tin ingots also disintegrated into a virtual paste.[368] It has been estimated that approximately a ton of tin went down with the Uluburun ship. The proposed ton of tin, and the over 10 tons of copper, fit the desired copper to tin ratio (10:1) for bronze production.[369]

The "gift exchange" inventories in the Amarna Letters also record the delivery of high status fineries and materials. These are Renfrew's "prestige chain" objects, or Liverani's politico-ceremonial correspondence. Many of the status-enhancing objects and materials that are being delivered as "gift exchange" in the Amarna Letters have been identified on the Uluburun shipwreck. *Rhyta,*[370] ivory,[371]gold chalices,[372] ebony[373] and an assortment

[364] Pulak 2000a, 137.
[365] Pulak 2000a, 140.
[366] Pulak 2000a, 143.
[367] Pulak 2000a, 150.
[368] Pulak, personal communication.
[369] Pulak 2001, 22.
[370] *EA* 25, 35-47; 49-51; Bass et al. 1989.
[371] *EA* 25, 25-6; 28-31; Pulak 2001, 37.
[372] *EA* 25, 76-7; Bass 1986, 286, 289, ill. 24.
[373] *EA* 25, 28-31; Bass et al. 1989, 9-10.

of gold jewelry,[374] just to name a few, appear in both the gift inventories in the Amarna letters and in the cargo of the Uluburun shipwreck.

The most noteworthy prestige items on board the Uluburun ship are the faience rams head *rhyta*.[375] The rhyton was manufactured exclusively for ritual consumption, and was a regularly exchanged commodity between the courts of the Late Bronze Age eastern Mediterranean.[376] The identification of five *rhyta* amidst the cargo of the Uluburun ship is a strong indicator it was on a royal mission. [377]

If the Uluburun ship was en route to the Mycenaean world, some of the ship's cargo of raw materials may have been en route to Mycenaean palatial workshops. Most Mycenaean specialists concur that metal entered the Mycenaean world through the palaces, and was then distributed to palace-sponsored workshops.[378] Similarly, the ivory recovered from the Uluburun shipwreck (1 elephant tusk and 14 hippopotamus teeth)[379] may have been en route to ivory carving workshops, which were also the exclusive domain of the Mycenaean palace.[380] The association of metallurgy and ivory carving to Mycenaean palatial industry may further tie the last voyage of the Uluburun ship to palatial enterprise.

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[374] *EA* 25; Pulak 2001, 24.
[375] Bass et al. 1989, 7.
[376] Peltenburg, 1991, 168.
[377] Bass et al. 1989, 19.
[378] Lejeune 1961, 409-34; Killen 1987, 361-72; Lang 1966, 397-412; de Fidio 1989, 7-27; Smith 1995, 167-259.
[379] Pulak 2001, 37
[380] Kopcke 1997, 143.

In chapter II, I had reviewed evidence (after Gale and Stos-Gale) suggesting the Mycenaeans were in possession of a copper mine at Laurion. Recall that 60 percent of the Bronze Age Aegean objects that have undergone lead isotope analysis have ratios consistent with Laurion ores. Cypriot ores account for 30 percent of the bronze objects analyzed.[381] The remaining ten percent were of ores that have yet to be identified.

Two discrete spheres of copper procurement, one domestic and one imported raises an important question relating to Mycenaean trade. Were the copper mines of Laurion insufficient to supply all the kingdoms? Perhaps Laurion metal was granted to only priveledged palaces, while others were forced to seek it abroad. Alternatively, the Mycenaeans (as a whole) may have exploited sufficient quantities of domestic copper, though sought to maintain access to all sources of copper in the Eastern Mediterranean.

Copper, like fossil fuel today, was the lifeblood of the Bronze Age political economy. A shortage of copper would have had disastrous consequences for the productivity and defense of a kingdom. To continue the modern parallel, the United States is sitting on vast reserves of oil, yet Americans engage in difficult politics around the world to ensure access to this resource. Likewise, the Mycenaean palaces would have engaged with copper exploiters abroad, to ensure as many avenues as possible to the essential metal. These efforts would have had the additional benefit of bringing the Mycenaeans, as

[381] See supra ns. 64 and 65.

outsiders and upstarts, into the elite circle of eastern Mediterranean trade and diplomacy. The copper-laden Uluburun ship was a vehicle, joining the Mycenaeans to their more sophisticated neighbors in the greater Levant.

The Uluburun shipwreck presents a wonderful contrast to the cargo and crew of the Cape Gelidonya ship. Data generated from the Cape Gelidonya shipwreck identifies it as an example of Renfrew's "freelance commercial trader." The merchandise of the Cape Gelidonya merchant is humble. His wares, primarily metal, have a wide appeal. He acts as both middleman and producer in metals trade and manufacture. His itinerary is not fixed to a particular region, as is evidenced in the diversity of the pan-balance weights.

Data generated from the Uluburun shipwreck, on the other hand, mirrors Renfrew's observation on the formalized exchange of metals in the Late Bronze Age. It is worth repeating his assertion that "formalities (of palace sponsored metal trade) were arranged in terms of gift exchange, masking the commercial nature of the transactions."[382] A palatial delivery of gifts would therefor include Renfrew's "prestige chain" objects, as well as commodities of "commercial" trade. Commercial wares (metal, ceramics) and prestige chain commodities (rhytons, ivory, gold jewelry) are both well represented on the Uluburun shipwreck. The Uluburun ship was likely on a royal mission when it met its fate off the southern coast of Anatolia.

[382] Renfrew 1972, 472.

THE MEN ON BOARD THE ULUBURUN MERCHANTMAN—A PAN-MEDITERRANEAN CREW?

The stage is now set for a discussion of the personal effects recovered from the wreck site, and ultimately the men who perished on board the ship. The overwhelming percentage of personal effects is of either Syro-Palestinian/Cypriot or Aegean manufacture[383] Syro-Palestinian weaponry including a sword,[384] daggers,[385] and arrowheads,[386] Syro-Palestinian pan-balance weights,[387] two diptychs,[388] a gold roundel[389] and two types of oil lamp (of Syro-Palestinian and Cypriot manufacture)[390] have all been recovered from the Uluburun wreck site. A pair of bronze cymbals,[391] an

[383] The exceptions include a stone scepter/mace (Pulak 1997, 253-4 fig. 20) and a globe headed pin (Pulak 1988, 29-30, fig. 36), which both share comparanda in the Baltic (Romania and Bulgaria for the scepter/mace and Albania for the pin) (Pulak 2001, 47). The globe headed pin, however, also shares comparanda with pins in sub-Mycenaean Greece. Pulak suggests the pin recovered from the Uluburun shipwreck probably represents the earliest Mycenaean example of this type (Pulak 2001, 47). The unique stone scepter/mace, however, shares no comparanda outside of the northern Baltic (Pulak 2001, 47). One weapon on a shipwreck, however, hardly attests to the existence of a northern Baltic man on board the ship.

A sword recovered from the Uluburun shipwreck (Pulak 1988, 21-3 fig. 22) shares comparanda with swords identified in southern Italy and Sicily (Thopsos type) (Vagnetti and Schiavo 1989, 223 fig. 28.2); (Pulak 2001, 45-6). No other Italian personal effects have been recovered from the shipwreck however, so it is unlikely an Italian boarded this ship (Pulak 2001, 46). Features of the sword also share comparanda with Early to Late Cypriot daggers, and lead isotope data on one of the sword's rivets is consistent with a Cypriot origin for the sword (Pulak 2001, 47). Pulak raises the possibility these might also be Cypriot.

[384] Pulak 1988, 20-2, fig. 20.

[385] Pulak 1998, 208

[386] Pulak 1988.

[387] Pulak 1988, 30-1 figs. 37-88.

[388] Bass 1990, 168-9.

[389] Bass et al. 1989, 4, fig. 4.

[390] Bass 1986, 281-2 ill. 14.

[391] Bass 1986, 288-90.

ivory trumpet,[392]and a partly gold-clad bronze statuette,[393] all of Syro-Palestinian manufacture, further hint at Semitic ritual objects.

For sake of argument, many of these items could have accumulated as valuable curios, or as necessities procured in foreign ports. A clue to the origin of the ship, however, and probably also some of the men on board, is hinted by the types of anchors it carried. All 24 anchors find their closest parallel to sets of anchors recovered from terrestrial sites at Kition (Cyprus), Ugarit (Syria) and Byblos (Lebanon).[394] These anchor-types are also found commonly off the coast of Israel.[395] It appears the ship was fully outfitted at one or more Near Eastern ports. This observation, coupled with the preponderance of Semitic personal effects on board the ship, is highly suggestive of at least some of the crew's origins (either Syro-Palestinian or Cypriot).

A service of fine LH IIIA2-B drinking vessels (Table 1), two Mycenaean swords (Table 2, Figures 7 and 8), at least six Aegean type spear points (Table 3, Figure 9), a pair of curve- bladed knives that appear to be Aegean in origin (Table 4, Figure 10), at least two Aegean type razors (Table 5, Figure 11), at least five Aegean-type chisels (Table 6, Figure 12), fifteen Mycenaean glass relief plaques from probably two pectorals (Table 7), faience and amber beads (Tables 8 and 9), and a pair of Mycenaean seals (Table 10, Figure 13), have also been recovered from the Uluburun shipwreck.

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[392] Pulak 1997, 205.
[393] Pulak 1997, 207 fig. 20.
[394] Wachsmann 1998, 283.
[395] See Pulak (1998, 216) for anchor finds off the Israeli coast.

A few considerations of the Aegean objects lessen the likelihood they were carried as trade items or as tourist trinkets. Several of the Aegean object-types had not been identified in eastern Mediterranean contexts outside of the Aegean, including the glass relief beads,[396] the utilitarian ceramics,[397] the chisels,[398] the spear points,[399] and the knives.[400] Comparanda (or at least similar object types) for the amber,[401] the Mycenaean swords, [402] and the Aegean-type steatite seals, [403] have been identified in eastern Mediterranean contexts beyond the Aegean. Consequently, the majority of the Aegean-type artifacts recovered from the Uluburun shipwreck do not appear to be objects that the Mycenaeans would have exchanged abroad.

A number of the Mycenaean objects have been identified in pairs on the wreck site, including the drinking jugs (Table 1), the swords (Table 2), the knives (Table 4), the glass relief plaques (in two motifs) (Table 7), and the seals (Table 10). This

[396] Harden 1981, 31-50.
[397] J. Rutter, personal communication; see supra n. 356.
[398] Pulak 1988, 17; Deshayes 1960, 38-9.
[399] The spear points closely resemble points identified in Urnfield culture contexts of southeastern Europe, (Pulak 1997, 255-6) though more properly belong to Avila's Type VI spear points which have been identified in late LH IIIB-C contexts on the Greek mainland (see infra pp. 116-7). Pulak recognized the points recovered from the Uluburun shipwreck may be Aegean, and would therefore represent the earliest examples of its type recovered from a Mycenaean context (Pulak 1997, 254; 2001, 47). These point types, however, do not share comparanda with any finds in the eastern Mediterranean.
[400] No comparanda for the knives have been identified anywhere in the eastern Mediterranean. The knives combine two features of Aegean examples, including a knobbed handle and a curved blade (see infra pp. 118-9). The Uluburun knives, however, are the only specimens to combine both features.
[401] See infra n. 491 for amber finds in Near Eastern contexts.
[402] An Aegean type Cii sword has been identified at Gezer in Israel (Driessen and Macdonald 1984, 72). Two Aegean Type B swords and one Type Di sword were recovered in Anatolia. The Type B swords have been identified at Hatussas (Hanson 1994, 213-5; Cline 1996), and at Izmir (in a Roman context) (Sandars 1961, 27-8 pl. 19.7). The type Di sword was identified at coastal Panaztepe, just north of Izmir (Cline 1996, 142).
[403] A Mycenaean-type "Mainland Popular Group" seal has been identified at Enkomi on Cyprus (Dickers 2001, 7).

conspicuous pairing does not suggest the effects were randomly picked up as trinkets, or as bric a brac from an Aegean port. Additionally, we have already observed that the ship did not visit the Aegean on its last journey.[404] All evidence suggests that two Mycenaeans had boarded the Uluburun ship at a Near Eastern port, and were probably returning home to the Aegean.[405]

Based on cargo alone, we have already determined the Uluburun shipwreck to be an important mechanism of trade between the Mycenaean Aegean and greater Levant. The mingling of Aegean and Near Eastern men on this doomed voyage adds a compelling element to this observation, and begs to know what roles these men were performing on board the ship.

The proposed presence of two Mycenaean men on board the Uluburun ship permits a range of intriguing possibilities. The ship sunk in a period of peak Mycenaean export to the greater Levant (LH IIIA2-B). Perhaps men from both regions comprised the merchant crew? Pulak's extensive study of the pan balance weights recovered from the Uluburun shipwreck will be our first step, to determine the role of the Mycenaeans on this ill-fated journey.

Of the 149 pan balance weights recovered from the shipwreck, 85 were intact enough to

[404] See supra pp. 101-2.
[405] Pulak 2001, 49.

be included in the analysis. The weights can be subdivided into at least three distinct weight standards. The most prevalent is based on multiples of a 9.2- 9.3 g unit. The 9.2-9.3 g unit corresponds to the Syrian shekel, which was a standard commonly used in Syro-Palestine and Cyprus. Another standard based on a unit mass of 8.2-8.7g. is represented, probably corresponding to the "Mesopotamian standard." A third standard is based on a unit mass of ca. 7.7g, corresponding to the southern Syro-Palestinian *peyem.*[406] Pulak has speculated the existence of a fourth standard, a Syro-Palestinian *necef*, based on a unit of 10.4 g. The *necef* are few however, and do not comprise a complete set.[407]

Four lead discs raise the possibility that an Aegean weight standard is represented on the Uluburun ship[408] (as the majority of the weights from the Aegean are discoid.)[409] Three of the four discs are pierced however, which raises doubt against their function as weights.[410] Of the three pierced disks, only one comes within reasonable weight range of an Aegean standard (three 61g units).[411] On the other hand, the fourth (non-pierced) lead disk may represent an Aegean weight. The 19.88 g weight is probably 1/3 of an Aegean unit of ca. 60g.[412]

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[406] Pulak 2000b, 259.
[407] Pulak 1996, 150.
[408] Pulak 1996, 128, 131.
[409] Petruso 1992, 2.
[410] Piercing serves no utilitarian function in a pan-balance weight (Petruso 1992, 4.). This modification suggests the disks served as spindle whorls.
[411] Pulak 1996, 130.
[412] Pulak 1996, 131; Petruso 1992, 78.

In conclusion, the pan balance weights on board the Uluburun ship consist of at least 7 weight sets are fashioned around the 9.3 g unit, or the Syrian shekel. At least two other weight sets that incorporate units of 7.7 g (Syrian *peyem*) and 8.7 g (Mesopotamian standard), respectively. Variant weights may be based on the Syrian *necef* (10.4 g), although they hardly represent a set. Lastly, one discoid weight might represent an Aegean standard. The implications for the missing Mycenaean weight set will be discussed in the following chapter.

A REVIEW OF THE MYCENAEAN OBJECTS

It was suggested above that the Aegean objects should be treated as personal effects brought onto the ship by the Mycenaeans.[413] The weaponry, jewelry, seals, tools and utilitarian pottery are all implements, which if interpreted correctly, should paint a compelling image of the Mycenaean presence on board the ship.

The analysis of the Mycenaean assemblage begins with a typological discussion of every object-type. The typological overview includes, where possible or relevant, determinations of the relative value and/or status attached to the individual object. The assemblage will then be discussed as a whole in Chapter VII, in an effort to establish the social rank, and perhaps even the occupation of its owners.

[413] Pulak 1997, 252-3; 2001, 14.

The Pottery

Roughly two-dozen Aegean ceramic vessels have been recovered from the Uluburun shipwreck (Table 1).[414] Rutter has grouped these within four functional categories (three transport and one utilitarian). Ten of the transport vessels are coarse fabric large stirrup jars with simple ornamentation. The fabric and ornamentation of the Uluburun examples differ considerably from comparable stirrup jars on the Greek mainland. Rutter assigns a Cretan manufacture to the large stirrup jars.

Eight of the transport vessels are smaller, with finer fabric and more elaborate ornamentation. All are of mainland origin and date to LH IIIA2. A singular pilgrim flask represents the third form of transport vessel, which was also manufactured on the mainland and dates to LH IIIA2. Rutter argues convincingly that the few transport vessels were in recirculation when the ship went down.

The utilitarian pottery includes decorated and plain pouring and drinking vessels (two jugs, a teacup, dipper and kylix) (Table 1). Significantly, the drinking wares represent forms that do not occur as exports in the eastern Mediterranean. This "drinking service" of Mycenaean finewares should not be thought of as cargo, rather as the personal fineries of the Mycenaeans on board the ship.

[414] J. Rutter, personal communication.

The service of Mycenaean finewares permits a number of intriguing observations. The beaked jug, kylix, and probably also the cup and dipper, exhibit early LH IIIA2 features. The round-mouthed jug, on the other hand, belongs to LH IIIA2-IIIB, fixing the *terminus post quem* for the sinking of the Uluburun ship to at least terminal LH IIIA2. Also, the remaining early LH IIIA2 finewares of this service can only be heirlooms, manufactured about 50 years before the sinking of the Uluburun ship. We can, therefore, begin to imagine a pair of Mycenaeans at sea, enjoying the privilege of sipping from a drinking service that was passed down through generations.

The Swords

Two bronze swords of Aegean type have been recovered from the Uluburun shipwreck (Table 2). The swords, with their single mold construction (tang and blade cast together), ribbed blade, flanged grip and cruciform shoulders with rounded lobes,[415] conform to Sandars' type Di swords (Figure 7).[416]

The most elegant and ornamented examples of the type Di swords were likely manufactured in a single workshop, which Sandars identifies at Knossos.[417]
It is significant that the destructions on LM IB Crete marked the end of ornate sword manufacture in the Aegean.[418] With this termination, the over-elaborated Di sword

[415] Pulak 1987, 93, fig. 3.
[416] Pulak 1987, 93; Sandars 1963, 123-4;
[417] Sandars 1963, 127.
[418] Sandars 1963, 127.

evolved into a utilitarian and comparatively drab Dii sword.[419] Dates for the Dii sword range from LH/LM IIIA2 to LH/LM IIIB, and possibly later.[420]

The type Di sword on board the Uluburun ship (which wrecked at the very beginning of LH IIIB likely represents a transitional Di/Dii style, where the ornamentation is diminished, but the midrib and unflanged pommel tang maintain Di attributes.[421] Type Di swords have been identified in burial contexts as late as LH IIIA1 Routsi,[422] Ialysos[423] and LH IIIA2 Pylos. [424]

Macdonald asserts that the ownership of a sword in the Late Bronze Age Aegean equates to "…a life connected with warfare…because their main functions are limited; they may have been prestige items representing military standing or weapons used by a select few in battle."[425] This singular observation, if correct, reduces the range of possibilities for the Mycenaean men on board the Uluburun ship. The sword was not just a weapon in the Mycenaean world—it was the mark of military aristocracy.

[419] Sandars 1963, 132. Excluding the decreasing ornamentation, the Dii type is differentiated from the Di type by losing the midrib, and replacing the unflanged pommel tang with a T-shaped flang extention.
[420] Sandars 1963, 130.
[421] Pulak 1987, 93-4.
[422] Driessen and Macdonald 1984, 70.
[423] Benzi 1988, 59, fig. 4-2.
[424] Blegen and Rawson 1966, 187-92.
[425] Driessen and Macdonald 1984, 56.

The Spear Points

At least 7 spear points recovered from the shipwreck belong to the compliment of Mycenaean weaponry on board (Table 3).[426] The points were molded into two forms, though both belong to Avila's Type VI spears. The Type VI spear is typically a short stocky weapon, with a slightly concave blade that swings out to the shoulders.[427] The stockier of the two forms, with its solidly cast and shortened socket (Figure 8b) belongs to Avila's Type VI variant with "short broad blade."[428] Comparanda for this form do not occur on the Greek mainland until LH IIIB-C (at Antheia near Patra),[429]or nearly a century after the sinking of the Uluburun ship.[430] The examples from the LH IIIA2-B Uluburun ship are the earliest of this point type found in Mycenaean contexts. The other form, with a longer socket and narrower blade (Figure 8a), belongs to Avila's Type VI Variant A spear point.[431] Chamber tomb 77 at Mycenae has produced three of these spear points, although no date has been assigned the burial.[432]

The spear was the most widely used weapon in the Mycenaean world.[433] It was also the most lethal.[434] For all their effectiveness in battle, however, the spear did not hold the

[426] Pulak 1997, 255. In the 1997 publication Pulak raises the possibility that these spear points may be either the earliest examples of their form on the Greek mainland , or they may have their origins in the "Urnfield Culture" of eastern Europe. In recent personal communication with Pulak, however, he favors a Mycenaean origin for the spear points.
[427] Avila 1983, 38.
[428] Avila 1983, 43-4, table 15.98.
[429] Avila 1983, 44
[430] Avila 1983, 44; Pulak 1997, 255.
[431] Avila 1983, 44, table 14.83.
[432] Avila 1983, 39.
[433] Driessen and Macdonald 1984, 58.

esteem of the sword. Three gold signet rings recovered from the shaft graves of Mycenae bear the only depictions of spear-armed and sword-armed antagonists in combat. In all three scenes, the sword wielder is victorious.[435] Moreover, the wide occurrence of spear points in burials, compared to the restricted appearance of swords,[436] suggests the greater prestige of the sword.

The Knives

A pair of curving knives likely belongs to the compliment of Mycenaean possessions on board (Table 4).[437] The more intact of the two has maintained its bronze handle, which terminates in a knob (Figure 11). The knives' downward curving blades, and the handle that terminates in a knob, are both attributes found in Aegean examples.[438] The Uluburun knives are unique however, in that no other example combines both attributes.

A knife with a downward curving blade similar to the Uluburun examples belongs to a set of bronzes, which Sandars identifies as the "Siana Group" (on Rhodes). The set comprises of a dirk, a knife, and a spear, which were allegedly looted from a Mycenaean

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[434] Sandars 1963, 128; Driessen and Macdonald 1984, 58.
[435] Driessen and Macdonald 1984, 58.
[436] Driessen and Macdonald 1984, 58.
[437] Bass et al. 1989, fig. 10.
[438] Sandars 1955, 21, fig. 3.1 (for knives that terminate in a knob); Sandars 1963, 140 (for knives with downward curving blades).

tomb at Siana.[439] The "Siana" knife is nearly identical to a type identified in a grave from Ialysos, also on Rhodes. [440]

Perhaps a better indicator of the Aegean origin of these knives is the handle, which ends in a knob (Figure 9). The Aegean comparanda belong to Sandars' Class 4 knives, though the blades of the Class 4 knives are straight backed rather than curved.[441] A similarity also exists in three rings fashioned below the knob on both the Uluburun shipwreck and Class 4 examples.[442] Three of the Aegean examples are from Mycenae and one from Dendra. Unfortunately no date or provenience has been assigned to them.[443]

The knife may have been used as a weapon or a tool in the Mycenaean world. Often knives appear in male burials with other weapons,[444] but not always. Knives have been identified in a female burial,[445] burials of children, and numerous male burials without other weaponry.[446] The knives from the Uluburun shipwreck could have been used as a weapon (in the absence of daggers) or as a cutting tool.

[439] Sandars 1963, 140.
[440] Sandars 1963, 140.
[441] Sandars 1955, fig. 3.1.
[442] Sandars 1955, fig. 3.1.
[443] Sandars 1955, 194.
[444] Kilian-Dirlmeier 1987-88.
[445] Korres 1974, 148-54.
[446] Lewartowski 2000, 40.

The Razors

At least 2 tanged and broad curving bronze blades have been identified on the Uluburun shipwreck (Table 5).[447] The implements, with their elongated handles and upward curving blades (Figure 10), most closely resemble Weber's Type IV variant IV b Aegean razors.[448] The nearest comparanda occur at LH IIIB Kos in the Dodecanese, Ialysos on Rhodes, and Mycenae (neither the Ialysos nor the Mycenae razors are dated).[449]

Razors occur in large numbers of burials across the Mycenaean world, though are conspicuously absent from simple cist and pit graves. Lewartowski, in his study of "simple graves" or relatively low status burials (which will be discussed in chapter VII), has identified only one razor. [450] Conversely, men buried with razors in monumental graves are often equipped with high status weaponry and other finery. Of the 100 MH-LH III C "razor burials" included in Weber's study, 30 exhibited swords.[451]

Mycenaean men used the razor as men use it today. A clean-shaven face was an important component of the Mycenaean male aesthetic.[452] The razors, the most intimate objects of the two men on board the Uluburun ship, offer us a glimpse of their vanity—

[447] Bass et al. 1989, Ill. 33.
[448] Weber 1996, ta. 41.
[449] Weber 1996, 153, ta. 41.
[450] Lewartowski 2000, 40. Lewartowski's study of non-monumental "simple graves" across the Late Helladic world includes 215 relatively intact cist and pit burials. His study provides a comprehensive overview of burial practices for the lower strata of Mycenaean society. Only one razor has been identified in Lewartowski's corpus of simple burials.
[451] Weber 1996, tables 1-5.
[452] Weber 1996, 18-22.

or their need to uphold appearance. Likewise, not every man could be expected to own these fine toiletries, crafted of precious bronze.

The Chisels

At least five chisels of Aegean type have been identified on the shipwreck (Table 6).[453] The exceptionally broad cutting edge of these chisels, coupled with a tapering tang, most closely resemble Deshayes' chisel Subtype C3 (Figure 11). One chisel belongs to Deshayes' Subtype C3a, and the remainder to Subtype C3b. [454] Subtype C3 chisels appear exclusively in the Aegean from the 14th to 12th centuries.[455]

The Uluburun ship carried a diverse kit of woodworking tools, including chisels from the Aegean and Near East, and axes, adzes and drill bits that were exclusively Near Eastern. [456] Woodworking tools on board a seafaring ship were undoubtedly used for ship maintenance and repair. Interestingly, the Aegean chisels, which were identified in a cluster at midships, were separated from the Near Eastern tools identified predominantly at the stern, and to a lesser extent at the bow.[457] The implications for the Aegean-type chisels will be explored in the following chapter.

[453] Pulak 1988, 17. Pulak identifies 6 Aegean type chisels, though I was only able to locate five in the Uluburun shipwreck field catalogue.
[454] Pulak 1988, 17; Deshayes 1960, 38-9.
[455] Pulak 1988, 17; Deshayes 1960, 38-9.
[456] Pulak 1988, 14-9.
[457] C. Pulak, personal communication.

The Glass Relief Plaques

The personal adornment of the two Mycenaeans may be glimpsed in the cache of 15 glass relief plaques recovered from the Uluburun shipwreck (Table 7).[458] The glass relief plaque is a uniquely Aegean craft, originating with the rise of Mycenaean civilization.[459] The pieces may either be strung into a necklace, sewn individually into garments,[460]or worn as a diadem.[461]

Ten of the 15 plaques bear three circular relief bosses, one on top of the other and each surmounted by ribbing. The triplet of circular bosses bears a spiral pattern, identical to two sets of glass relief plaques recovered from Ialysos.[462] The remaining five plaques are adorned with a "figure-of-eight shields" motif. Two "figure of eights" are laid horizontally, one on top of the other and separated by ribbing. An identical set of glass relief plaques has also been identified on Rhodes, although its provenience is unknown.[463]

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[458] Pulak (1998, 218) and Bass (Bass et al. 1989) refer to the individual components of the glass necklaces as pendants, though they are more properly plaques. A pendant is cast with a finial, and a singular thread hole runs through the finial. A plaque (like the examples from the Uluburun ship) is not cast with a finial extension, and normally two thread holes run through its form (Harden 1980, 41-9). For a comparison of a plaque versus a pendant, see Harden (1980, pl. VI, figs. 68-71 for pendants, and pl. III for plaques).
[459] Hughes-Brock 1999, 287.
[460] Haevernick 1960, 38, 47.
[461] Yalouris 1968, 9.
[462] Harden 1981, 46, pls. 4.56, 4.59. The circular boss spiral is a stylistic derivation of the "curls of hair" motif found on several Aegean plaque and pendant forms (Harden 1981, 45-6).
[463] Harden 1981, 62, pl. 5.62.

Glass appears in numerous burial contexts across the spectrum of Late Mycenaean society. Their wide dispersal has generated some controversy in Mycneaean scholarship. How valuable was glass jewelry to the Myceanaeans? Haevernick argues that glass was an "astounding new invention" and a "novel and precious material."[464] Glass making, an art that was probably learned from the Egyptians, does not appear in the Aegean until the 16th century.[465] Like so much else that was imported from the Orient, the products of this new technology (according to Haevernick) enhanced the status of whoever possessed it. Harden,[466] Peltenburg,[467]and Dickinson[468] agree with Haevernick's assertions of the high value of Mycenaean glass.

On the other hand, scholars including Papadopoulos[469] and Wace[470] assert that glass was a cheap substitute for the far more precious metals. Many of the gold pendant/plaque and bead forms of the Late Minoan and Mycenaean periods have glass imitations.[471] Glass appears to have been mass-produced, and therefore seems to have been reserved for those who could not afford gold and other precious materials.[472] Haevernick and Harden counter that this is an unfair imposition of modern conceptions of glass, and that

[464] Haevernick 1963, 191.
[465] Higgins 1969, 42.
[466] Harden 1981, 39-40.
[467] Peltenberg 199, 162
[468] Dickinson 1994, 186.
[469] Papadopolous 1980, 145.
[470] Wace 1932, 221.
[471] Higgins 1969, 76
[472] Forbes 1966, 8-10; Bielefeld 1967, 25; Higgins 1974, 17

we must consider the novelty of glass in the Late Bronze Age Aegean, when assessing its worth to the Mycenaeans.[473]

While it is true that glass was mass-produced, and was, therefore, accessible to a wide spectrum of Mycenaean society, it appears the elite did not scoff at glass relief jewelry. The magnificent "Kings Tholos" at Dendra, which has produced two type Ci swords, gold and silver Vapheio cups,[474] an ostrich egg with mounting,[475] gems of lapis lazuli, ivory, and sundry gold jewelry,[476] also yielded a wide assortment of glass relief plaques and pendants.[477] A chamber in Tholos III at Pylos (LH II-IIIB) has produced a bronze dagger or sword, gold and silver jewelry, ivory carvings, gemstones,[478] and eight sets of glass relief plaques.[479]

Importantly, in Lewartowski's study of "simple grave" burials, unelaborated glass beads appear in numerous lower-status Late Helladic pit and cist graves. Conversely, the more elaborate glass relief plaques are exceedingly rare in these contexts. Glass relief plaques occur almost exclusively in the monumental burials.[480] It appears that glass was available to a wide spectrum of Mycenaean society, although glass plaques, like those found on the Uluburun ship, were an exclusive adornment of the higher classes.

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[473] Haevernick 1963, 193.
[474] Persson 1931, 33
[475] Persson 1931, 37
[476] Persson 1931, 29.
[477] Persson 1931, 103-5, pl. 35.
[478] Blegen et al. 1973, 83-7.
[479] Blegen et al. 1973, 87-8. fig. 171.
[480] Lewartowski 2000, 35.

The Faience Beads

The most numerous Mycenaean objects recovered from the Uluburun shipwreck are the amygdaloid faience beads (Table 8). The amygdaloid bead, run lengthwise with ridges or ribs, is a distinctly Mycenaean form. Examples of this bead type have been identified in the "Kings Tholos" at Dendra,[481] and chamber tomb 1:1 at Asine.[482]

The sum of 179 amygdaloid faience beads recovered from the Uluburun shipwreck may have belonged to two faience necklaces. A faience necklace identified in the "King's Tholos" is strung with 81 amygdaloid beads (or nearly half the number recovered from the shipwreck). Alternatively, faience beads were also worn as spacer beads between glass relief plaques.[483] The occurrence of a limited number of "circular boss" and "figure of eight shields" plaques on board the ship (ie not enough to complete a necklace) raises the possibility that these 179 amygdaloid beads may have also been worn as spacers.

Both elite and common objects were manufactured of faience.[484] Significantly, the scarcity of gold and silver towards the end of the Late Helladic period saw a

[481] Persson 1931, 30, pl. VIII.
[482] Frödin and Persson 1938, 376.
[483] Buchholz and Karageorghis 1973, 111 #1311; Foster 1979, 144.
[484] Foster 1979.

considerable increase of faience objects in burials.[485] Like glass, faience may have served as a substitute for the more precious stones and metals. Faience and glass were of comparable value in the Mycenaean world. Simple beads of either material were not highly prized by the Mycenaeans. Their similar value suggests to Foster that the two industries were in competition. Glass may have had an advantage, however. Glass' closer resemblance to semi-precious stones (lapiz lazuli) suggests it was the more highly prized material.[486]

The Amber Beads

Thirty-nine amber beads add to the personal adornment of the Mycenaeans on board the Uluburun ship (Table 9). Amber appears in very limited quantities in Bronze Age Near Eastern contexts,[487] though was quite popular in the Aegean (including western Anatolia).[488]Amber first appears in the Aegean near the end of the Middle Helladic period, when it suddenly inundates the shaft graves.[489] The origin of nearly all Mycenaean amber is the Baltic. [490] Renfrew has suggested that the amber reaching mainland Greece during the Shaft Grave period was arriving via a "prestige chain" of

[485] Foster 1979, 158.
[486] Foster 1979, 158.
[487]Exceptions in the eastern Mediterranean include 17 amber scarabs indentified in XVIIIth dynasty Egypt (Lamberg-Karlovsky 1963, 301-2); Two beads from Assur (Harding and Hughes-Brock 1974, 169); And 6 beads from Enkomi, Cyprus (Harding and Hughes Brock 1974, 169).
[488] Harding and Hughes Brock 1974, 145-72.
[489] Hughes-Brock 1985, 258.
[490] Harding and Hughes Brock 1974, 156.

gift exchange, extending from the Baltic to the mainland centers, particularly Mycenae.[491]

Amber during the Shaft Grave period was the exclusive adornment of the elite. It occurs only in the great burial complexes of the Mycenae shaft graves, and the tholoi of LH I-II Messenia. Through successive generations however, amber was dispersed, and subsequently became available to a wider cross section of society. Regardless, amber was coveted, and was worn ostentatiously by whomever possessed it. [492]

The Seals

Two Mycenaean seals carved of steatite have been recovered from the Uluburun shipwreck (Table 10).[493] The better preserved of the two is adorned with a "triskel" motif (Figure 12), and the other with a highly stylized ungulate. Steatite seals belong to Younger's "Mainland Popular Group,"[494] which first appear on the Greek mainland in LH IIIA. The popularity of steatite seals peaked in LH IIIB,[495] with numerous examples identified in contexts all over the mainland, the Cyclades, the Troad, on Crete, Rhodes, and Cyprus.[496]

[491] Renfrew 1972, 467-8.
[492] Hughes-Brock 1985, 259.
[493] Bass 1986, 283-5.
[494] Younger 1987, 65; 1989, 106.
[495] Dickers 2001, 9
[496] Dickers 2001, 7, map 1.

The "Mainland Popular Group" seals occur predominantly in modest burials, although many examples have also been identified in settlements and in sanctuaries.[497] Their wide distribution in humble burials, coupled with the simple ornamentation and unflattering material, assigns the "Mainland Popular Group" seals to common usage.[498]

The seal was pierced so that it may be strung by its owner and worn. Seals were typically carried as ornaments of personal identification. The impressions of these cut stones would also serve to mark (or seal) containers and documents.[499] The seal should, therefore, act as the ideal indicator of social rank. The steatite seals, however, amidst the assemblage from the Uluburun shipwreck present a difficulty. A pattern of Mycenaean fineries has been revealed on board the Uluburun ship. The drinking service, amber and glass relief beads, the bronze razors, and a pair of swords speak of individuals with significant means. The seals, on the other hand, are of the most common variety. This intriguing anamoly will be addressed in the following chapter, when we attempt to assign social rank to our presumed pair of seafaring Mycenaeans.[500]

[497] Dickers 2001, 7, 71-72.
[498] Younger 1987, 65.
[499] Aruz 1998, 301-2.
[500] A summary of the shipwreck data will also be included at the end of chapter VII.

CHAPTER VII

ASSIGNING SOCIAL RANK AND OCCUPATION

The Mycenaean assemblage from the Uluburun shipwreck is now laid out before us. Individually, the objects have already told us a great deal. Studied as a whole, the assemblage should reveal the relative status held by the owners of these artifacts, and perhaps also, their role on board. This chapter is about the two Mycenaean men who went down with the Uluburun ship.

Archaeology's most important medium for studying the individual, and how he or she might have fit within the matrix of their given culture, is the burial. For this discussion, the Uluburun shipwreck will be treated like a gravesite. We might imagine the personal effects of the fated Mycenaeans entombed in the ship's hull. In this way, we can compare the Mycenaean assemblage of the Uluburun shipwreck to the corpus of burials in the Mycenaean world. This cognitive leap will allow us to address the important questions of social rank and occupation for the pair of seafaring Mycenaeans.

A shipwreck, though, is not a burial. We should not expect a man to be outfitted similarly on a seafaring voyage, and in his grave. Pader sharply criticizes what she calls the "oversimplification of the relationship between material culture, social

organization and burial ritual."[501] The burial context, by virtue of inhumation as an act of ritual, is an idealized representation of the individual, and may distort somewhat the reflection of their social position.[502] The shipwreck, on the other hand, is a virtual snapshot of the day to day activities. Shipwreck victims are outfitted with the weapons, tools, and utilitarian wares that are essential to their labor, their comfort, and their safety. They are also in possession of the adornments that advertise their status in the living world. A shipwreck offers a portrait of life, a burial of death. The Uluburun shipwreck should, therefore, not be equated to a burial. Rather, burials will serve as a guide in this effort to determine the relative status, and perhaps the occupation, of the Mycenaeans on board the Uluburun ship.

Three statistical tools have been used to measure the ultimate worth, or the relative status, of Mycenaean burial offerings. The first two, most notably employed by Graziadio and Lewartowski, quantifies the inherent value of grave offerings in a burial. Graziadio attaches a (relative) numerical value to every object, which is derived from variations in the material of the object, the time invested in manufacturing the object, and its symbolic significance.[503] For example, the precious gold invested into the manufacture of a Vapheio cup, the craftsmanship applied to the detailed battle scene motifs, and the battle scene itself, glorifying the elite warrior class of the Mycenaean world—all imbue the Vapheio cup with exceptional worth.

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[501] Pader 1982, 65-8.
[502] Pader 1982, 44.
[503] Graziadio 1991, 413.

Graziadio quantifies the 3 attributes (material, time invested and symbolic significance) to achieve a numerical value, which in the case of the gold cup, becomes 25 "units of wealth," or the highest numerical value possible for a single object.[504] Conversely, domestic ceramics made of local clay achieve a numerical value of 1. These values become significant when they are added to the value of all other objects in a single burial assemblage. A sum of "units of wealth" can therefor be attached to every burial, which ranks it accordingly. A burial with 130 units of wealth exhibits greater status than a burial with 90 units of wealth.

Lewartowski attaches less significance to each individual object. He assesses, rather, the ultimate worth of an object-type by its consistent association with a range of other object-types. His methodology is based on the assumption that higher status graves exhibit a greater variety of object-types than lower status ones. Here, the value of an object-type is not quantified by intrinsic attributes (i.e. the quality of the material or time invested into the manufacture of the object). Rather, a value is attached to an object-type only when it occurs within a pool of other object-types.

Types of objects that regularly occur in burials are assigned a numerical value termed its "status index." The "status index" is a calculus derived from the average number of

[504] Graziadio 1991, 413.

other object-types that occur with a given object-type in the pool of burials.[505] Object-types that occur in wide-ranging and complex grave assemblages are assigned a higher "status index" than object-types that appear in limited or simpler grave assemblages. Swords, for instance, occur in assemblages with numerous and varied objects and achieve a status index of 15 (or the highest status index possible for an object). Pins occur in more limited assemblages and achieve a status index of 7. Storage pottery ranks at the bottom of grave offerings, with a status index of 1.[506] Here, the status of a burial is measured by the sum of status indices for every object-type identified in the grave assemblage.[507]

Cavanagh and Mee are skeptical of methods that quantify the value of a grave, and have introduced a third statistical model to assess the social rank of an Aegean burial. Mycenaean tombs can rarely be assigned to one individual, and often it is difficult to distinguish how many individuals have been interred.[508] Perhaps more problematic, grave offerings are often disturbed, pilfered or robbed.[509] Cavanagh and Mee assert that the quantification of a burial's value is impossible because there is little way of knowing with certainty what objects were originally interred with most burials. This observation inspired their creation of another statistical model that measures the value of a burial on the presence or absence of a "series of attributes" (or a series of specified classes of

[505] Lewartowski 2000, 27.
[506] Lewartowski 2000, 119, ta. 27.
[507] Lewartowski 2000, 27.
[508] This is the case only for monumental burials. The vast majority of cist and pit graves are single interment burials (see infra n. 522).
[509] Cavanagh and Mee 1990, 56.

artifacts).[510] Cavanagh and Mee designate 46 classes of artifacts, whose presence or absence in a grave assemblage should either elevate or lower the status of a burial.[511] The presence-absence analysis allowed them to cluster 166 Mycenaean burials into four wealth classes.[512] Unfortunately, for this discussion, they did not make explicit their methodology (i.e. by stating which objects were generally present or absent in wealthy or non-wealthy graves). Their statistical model can, therefore, not be applied to investigations outside of their own.

The uncertainty surrounding the original deposition of the burial offerings (the objection raised by Cavanagh and Mee against quantification) is minimal in both Graziadio's and Lewartowski's studies. Graziadio employed his quantifying model on the famed Grave Circles A and B of the Mycenae shaft graves. No clear evidence of looting or plunder has been observed in either of these elite burial complexes.[513] Lewartowski's much more encompassing study selected 213 non-monumental Mycenaean burials that have survived relatively intact.[514]

Lewartowski's non-monumental graves have an important advantage over Graziadio's Mycenae shaft graves. The vast majority of non-monumental graves are single interment burials.[515] The shaft graves, on the other hand, are burial complexes with

[510] Cavanagh and Mee 1990, 56.
[511] Cavanagh and Mee 1990, 56-7.
[512] Cavanagh and Mee 1990, 57-8.
[513] Graziadio 1991, 414.
[514] Lewartowski 2000, 41.
[515] Lewartowski 2000, 20.

multiple internments. Graziadio has had to grapple with the difficulties of attributing artifact assemblages to specific individuals.[516] Lewartowski's single interment burials offer no such difficulty. Thus, the objections raised by Cavanagh and Mee (looting/disturbance and the difficulty of associating assemblages to individuals) bear no relevance to Lewartowski's study.

Also, Lewartowski's methodology (or his criteria for ranking) are stated much more explicitly, and are much more objective and testable than Graziadio's. Graziadio scale for "units of wealth" is based on Graziadio's determinations on what is valuable and what is not valuable. Presumably, gold is more valuable than silver so gold objects are assigned greater units of wealth. Similarly, a decorated sword is more valuable than an undecorated sword so decorated swords are assigned greater units of wealth. His scale is tautological, in that only the attributes that imbue an object with greater value increase the value of an object. Also, his determinations are entirely subjective, and cannot be tested (i.e., proved or disproved). The subjectivity of his study reduces its applicability to other investigations.

Lewartowski's scale, on the other hand, is based on criteria that are observable and measurable. An object-type is of greater worth when it is associated with a larger number of object-types in a pool of burials. Conversely, an object-type is of less value when it is associated to a fewer number of object-types. The objectivity of these criteria,

[516] Graziadio 1991, 414-5.

coupled with the easy association of offerings in single interment burials, gives Lewartowski's study important advantages over Graziadio's. Consequently, we will apply Lewartowski's model to the Mycenaean assemblage identified in the Uluburun shipwreck.

Before proceeding, the limitations of Lewartowski's statistical model (for our purposes) should be made explicit. I have already mentioned that the Uluburun shipwreck is not a burial. Additionally, Lewartowski's research domain is confined to what he calls the "simple graves" of the Mycenaean world. These are the less assuming cist graves and pit burials that have been largely overlooked by Mycenaean scholarship. The most conspicuous burials in the Mycenaean Aegean, namely the monumental shaft graves and built tombs, tumuli, tholoi, grave circles, chamber tombs and large cist burials, are not included in Lewartowski's study.[517] Consequently, the focus of Lewartowski's study is the humbler classes of Mycenaean society. The corpus of "simple graves," however, does crosscut Mycenaean social strata (i.e. both the poor and the wealthy are buried in simple graves). This is particularly true for LH IIIA-B simple burials,[518] which is fortunate, as these are roughly contemporaneous with the Uluburun shipwreck.

The Mycenaean assemblage from the Uluburun shipwreck will now be integrated into Lewartowski's study. The sum of Mycenaean objects, including the utilitarian pottery, swords, spear points, knives, razors, chisels, glass relief plaques, faience and amber

[517] Lewartowski 2000, 1.
[518] Lewartowski 2000, 62.

beads, and seals, would amount to a status index of 79.05 (Table 11). As a simple grave, the Uluburun shipwreck would possess the third highest status index of every cist and pit burial recorded in Lewartowski's study (Table 12). If the Mycenaean objects from the Uluburun shipwreck were interred into a Late Helladic grave, their owner would be described as a member of the elite.

We are still left with the difficulty of the cheaply manufactured "Mainland Popular Group" seals recovered from the Uluburun shipwreck. Would men of such high rank wear dull steatite seals on their wrists? Two burials at Sellopoulo on Crete are striking in their resemblance to the Mycenaean assemblage from the Uluburun ship. We should ask what manner of seals accompanied the men buried at Sellopoulo, to get a sense for what quality of seals would have been worn by individuals of similar stature to the pair who went down with the ship.

Burial II of Tomb 4 at LM IIIA Sellopoulo has produced a ceramic conical cup and two kylikes,[519] a class Di sword,[520] a bronze knife,[521]relief beads of faience and gold, and two lentoid seals. One of the seals is made of crystal, and the other of carnelian.[522] In the same tomb complex, Burial I has produced a ceramic jug and kylix[523] a type Di

[519] Popham et al. 1974, 202.
[520] Popham et al. 1974, 202.
[521] Popham et al. 1974, 202, 229.
[522] Popham et al. 1974, 202, 224-5.
[523] Popham et al. 1974, 199.

sword,[524] two spear points,[525] a razor,[526] faience and gold relief beads,[527] and a gold-capped carnelian lentoid seal.[528] The quality of the seals offered in the Sellopoulo burials is far superior to the steatite examples from the Uluburun shipwreck. Perhaps, the steatite seals served a purpose other than ornaments of personal identification.

Five seals from the "Mainland Popular Group" have been identified in the east shrine of the Phylakopi sanctuary, on the island of Melos. The seals were all found next to a pedestal, along with animal idols and vessels. Clearly, these steatite seals were laid down as votive offerings.[529] The speculated Mycenaean sanctuary of the Athena-Pronaia temple at Marmaria, as well as a house alter at LH IIIB Tiryns, have both produced "Mainland Popular Group" seals.[530] The offering of seals as votives was a widespread phenomenon in the Mycenaean world. Non-steatite seals have been identified in the Ayia Irini temple on Kea, in the "House of Idols" at Mycenae, and in the west shrine of Phylakopi on Melos.[531]

The common steatite seals recovered from the Uluburun shipwreck do not befit men who arm themselves with swords, who sip from a finewear service, who wear ornaments of glass relief beads and amber, and who shave their face with precious bronze. These

[524] Popham et al. 1974, 202, 225.
[525] Popham et al. 1974, 202, 229.
[526] Popham et al. 1974 202, pl. 35d.
[527] Popham et al. 1974, 201.
[528] Popham et al. 1974, 201-2, 224.
[529] Dickers 2001, 72;
[530] Dickers 2001, 71-2.
[531] Dickers 2001, 73.

seals were probably not worn as ornaments of personal identification. The personal identification seals, if they had them, were likely worn on their bodies that floated away from the scene of the disaster. The steatite steals, on the other hand, may have been carried as amulets of good luck. Perhaps these were destined for a sanctuary pedestal, where they would have been laid in humble obeisance for a safe seafaring journey.

OCCUPATION

When it first became apparent that Mycenaeans were on board the Uluburun ship, Pulak suggested these men were merchants.[532] Since studying the pan balance weights recovered from the shipwreck, however, he has reached a different interpretation. Only one of the 149 pan balance weights recovered from the shipwreck may be Aegean. Consequently, Pulak argues the Mycenaeans could not have been performing the role of merchants. [533]

Pulak's reasoning is based on the following observations. Merchants voyaging overseas should be equipped with a familiar weight standard. [534] When a Mycenaean calls to a Syrian port, he must convert the weight/value of a given commodity into a familiar (ie Aegean) scale. Pulak likens this to a modern traveler abroad, carrying a calculator to quickly factor the exchange rate in a transaction.[535] The absense of an Aegean weight

[532] Pulak 1988, 37.
[533] Pulak 1997 252-3; 2000b, 264; 2001, 14
[534] Pulak 2000b, 264.
[535] C. Pulak, personal communication.

set on board the Uluburun ship suggests to Pulak that the two Mycenaeans had little to do with the procurement of the cargo. He proposes, rather, that the pair of Mycenaeans may have acted as emissaries or envoys, accompanying a cargo of reciprocated "gift exchange" to the Aegean.[536]

In chapters III and IV we learned of "messenger merchants" in the Amarna Letters; the pawns of a highly elaborate game of Late Bronze Age interregional diplomacy. These were the officials appointed by their kings to relay his well wishes and gifts to his counterparts in the eastern Mediterranean. The Assyrian texts relate similar officials, and the Hittites describe the activities of *Ahhiyawan* (Mycenaean) "messengers." All of these were likely put in charge of gift deliveries, similar in concept if not scope to the cargo of the Uluburun ship.

The quality of the weaponry and personal adornments of the Mycenaeans on board the Uluburun ship suggests they belonged to the aristocracy. It follows these men may have represented Mycenaean palatial interests. A Mycenaean palace would have had several concerns anticipating the delivery of this extraordinary cargo, not the least of which was the dangerous business of gift delivery. Recall from chapter IV the Egyptian bandits who murdered the messenger/merchants of the king of Karaduniyas in the Amarna Letters. Similarly on the high seas, piracy remained a looming threat for these high-profile missions. The heavily armed Mycenaeans were clearly a show of force on

[536] Pulak 1997, 252-3; 1998, 218; 2000b, 264; 2001, 14, 49.

board the ship. Two Mycenaeans warriors, rather than one, was further fortification against attack.

Their role on board, however, should not be confined to armed escorts. The Aegean-type chisels recovered from the Uluburun shipwreck have introduced an interesting variable to this study. Chisels are typically associated with wood working tools, and we should ask why these tools were brought onto the ship by the Mycenaeans. The majority of these tools were found together near midships, separated from the Near Eastern axes, chisels, adzes and drill bits located predominantly at the stern.[537] The separation of the Aegean-type chisels from the more numerous and diverse Near Eastern tools suggests to Pulak that the chisels may not have been used for the maintenance of the ship. [538] Also, we should expect (according to Pulak) a greater diversity of Aegean-type woodworking tools if the Mycenaeans did have some part in the maintenance and repair of the ship.

What use then, could the Mycenaeans have had for these woodworking tools, if not for activities related to ship maintenance? Pulak has argued persuasively that the Mycenaeans on board were not merchants. Should their non-merchant status also exclude them from activities related to the maintenance and sailing of the ship? The Uluburun merchantman was not a large seagoing craft. The length of the ship was

[537] Pulak 1988, 14-9.
[538] C. Pulak, personal communication.

probably 15 meters,[539] with a carrying capacity of about 20 tons.[540] The extraordinary haul of metal and transport jars suggests space was a premium on board the ship. Efforts were probably made to maximize cargo space, which would have included keeping the number of humans on board to the minimum required for sailing. The Mycenaeans, if they were on board the ship only as escorts, would have been burdensome to the voyage. Perhaps, to keep the number of humans on board to a minimum, thereby freeing valuable space for the cargo, the Mycenaeans acted as both armed escorts and (provisional) sailors.

If we are uncomfortable with assigning high-ranking Mycenaeans to the task of ship maintenance and/or sailing, we are left with only idiosyncratic explanations for the chisels. Were these Aegean tools adopted by one of the Near Eastern crew on a previous voyage? Perhaps the Aegeans had some other use for the chisels, which was not related to ship maintenance.[541]

A most intriguing, yet also the most speculative aspect regarding the identification of the two Mycenaeans on board the Uluburun ship, suggests these men were an official embassy returning from the Near East on a diplomatic mission. Their swords and jewelry were certainly worn with pomp, and could befit representatives of a Mycenaean

[539] Pulak 1999, 210. The length estimate is based on the distribution of the ship's cargo on the seafloor.
[540] Pulak 1999, 210-13. The tonnage estimate is based on the sum weight of excavated cargo, anchors and ballast.
[541] Pulak (personal communication) suggests the Mycenaeans must have resided at the Near Eastern port from which they boarded the ship, and consequently may have used these tools while ashore.

court. These men may well have been "messengers," relaying the well wishes and the grievances between their *wanax* and his counterpart(s) in the eastern Mediterranean.

The Follower

One high-ranking official in the Mycenaean bureaucracy stands out for his far-flung responsibilities and diverse set of administrative attributes. In chapter IV of this thesis I introduced an official titled *e-qe-ta* in a discussion of the *o-ka* tablets. The original meaning of *e-qe-ta* is "follower" (of the king),[542]and he is long presumed to have held a military position for his appearance in the set of five *o-ka* tablet*s* (PY An 657, An 654, An 519, An 656, An 661).[543] To review from chapter IV, the *o-ka* tablets are lists of personnel, arranged into groups and assigned to coastal locations. A military interpretation of the *o-ka* tablets stems mostly from the first line of the set, which denotes "watchers are guarding the coastal areas." The king's representatives, *e-qe-ta*, have been stationed with select groups of "watchers."[544]

Complications have arisen with the martial interpretation of these tablets. A recent reassessment of the *o-ka* set has identified *o-ka* as a work group, not as a detachment of military personnel.[545] Hooker has suggested that *o-ka* represents a work unit concerned with agricultural endeavor. His agricultural interpretation of the *o-ka* tablets, however, does not address the first line of the set specifying, "watchers are guarding the coastal

[542]Deger Jalkotzy 1999, 128.
[543]Deger-Jalkotzy 1978, 5-6.
[544] Hooker 1987, 264.
[545] Hooker 1987, 265.

areas." Regardless, the present discussion will not attempt to resolve whether the *o-ka* tablets address martial or agricultural concerns (the military association of *e-qe-ta,* and subsequently the *o-ka* tablets, will be discussed below). In either case, Hooker's observations of the role of *e-qe-ta*, listed amongst the personnel in the *o-ka* tablets, are compelling.

Individuals identified by their personal name in the genitive command every *o-ka* group. Below him are several personal names in the nominative, representing men of lesser rank than the commander/supervisor, but of higher status than the rank and file of the rest of the *o-ka* list.[546] *E-qe-ta* is thus introduced to the *o-ka* list: "...and with them (a personal name) the *e-qe-ta.*" *E-qe-ta* is distinguished from the members of the *o-ka*. He is a visitor, not belonging to the work group (or military detachment). *E-qe-ta*, therefore, do not arrive to the coast as permanent supervisors (or commanders) of these crews. Hooker suggests that *e-qe-ta* are representatives of the king (*wanax*), sent to "check the composition and activity of the work groups"—palatial inspectors rather than supervisors."[547] This role is not inconsistent with *o-ka* as a military detachment.

Arguments for the military standing of *e-qe-ta* (contra Hooker) may be read in the "Arsenal Texts" of Knossos, and the association of *e-qe-ta* to chariots. *E-qe-ta* is recorded on Knossian tablet As 4493, which belongs to the Knossian "Arsenal Texts."

[546] Hooker 1987, 264.
[547] Hooker 1987, 265.

The text is fragmentary, though the title "watchers" (*e-pi-ko-wo*) appears with e-*qe-ta*.[548] Perhaps *e-qe-ta* at Knossos, like at Pylos, was overseeing "watcher" installations along the coasts. The appearance of *e-pi-ko-wo* and *e-qe-ta* in the "Arsenal Texts" suggests the "watchers" were manning military installations. Additionally, *e-qe-ta* are linked to chariots in the Pylos texts Sa 753, 787, and 790. The Sa series is an inventory of wheels (for chariots). Several pairs of wheels are allocated specifically for *e-qe-ta.*[549] We can imagine how the chariot would have benefited this highly mobile palace official.

Deger-Jalkotzy places *e-qe-ta* within the political sphere of a Pylian-ruled Messenia. A clear administrative distinction exists between "der Zentralherrschaft des Palaces" and "die Verwaltung der Provinzen." The tablets identify *e-qe-ta* operating in both contexts."[550] *O-ka* units belong to the outlying provinces along the coast. Interestingly, approximately half of the *o-ka* personnel (where *e-qe-ta* are sent) possesses non-Greek names.[551] The implication is that the non-Greek individuals belong to the indigenous population, which was subjugated by the Mycenaean Greeks of Pylos.

These indigenous non-Greeks would have been useful as "watchers" along the coastal territories for their familiarity with the coastline, its inhabitants, and the adjacent landscape.[552] The clear disadvantage to assigning these men to the coastal guard is that they are a subjugated people. The province of a kingdom is universally vulnerable to

[548] Deger-Jalkotzy 1978, 92.
[549] Deger-Jalkotzy 1978, 79-83.
[550] Deger-Jalkotzy 1978, 202-3.
[551] Deger-Jalkotzy 1978, 45.
[552] Deger-Jalkotzy 1978, 43.

social unrest and potential insurrection. Deger-Jalkotzy suggests that a principle role of *e-qe-ta* in the *o-ka* units, and the provinces in general, was to ensure the fealty of the local population. This position would be entrusted to the most loyal administrators of the *wanax*, *e-qe-ta*, his "followers."[553]

E-qe-ta in the Knossosian archives behaves somewhat differently from his Pylian counterpart. *E-qe-ta* at Pylos live in the palace, and are sent on missions to check up on or oversee the provincial territories. Knossian *e-qe-ta,* on the other hand, live in the various provinces they are presumably overseeing.[554]

These administrative attributes liken *e-qe-ta* to a type of governor/ambassador. He speaks for the palace, to the populations at the fringes of its kingdom. It seems he would also voice the concerns of the indigenous population to the king. Two *e-qe-ta* in the Pylian archives possess non-Greek names, or more correctly, foreign names that have been adjusted to sound Greek.[555] Perhaps these men belonged to the indigenous non-Greek population, and proved so valuable in the administration of their given region, that they were awarded with an *e-qe-ta* position. Regardless, it is *e-qe-ta* who maintains the king's authority, and protects his interests at the far reaches of the kingdom. This is accomplished, partly, through his military standing in the administration.

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[553] Deger-Jalkotzy 1978, 203.
[554] Deger-Jalkotzy 1978, 84.
[555] Deger-Jalkotzy 1978, 47, 48, 50.

Deger-Jalkotzy offers us another compelling glimpse of *e-qe-ta* through the combined Knossian tablets Lc 646, Ld 571, 572, 575, 583, and L 871. The records are concerned with the production, storage and distribution of textiles. The fabrics documented in the Ld series fall under two categories. The archives record shipments of cloth that are being delivered to the palace, and units of cloth that are being stored in the palace warehouses, respectively.[556] A high quality fabric called *e-qe-si-ja* appears exclusively in the "warehouse" archive. The *e-qe-si-ja* fabric is directly associated with *e-qe-ta.*[557]

Deger-Jalkotzy attempts to determine how the administrative position of *e-qe-ta* is related to the textile. She argues persuasively that *e-qe-si-ja* represents a textile manufactured specifically for *e-qe-ta.*[558] This observation raises two possibilities. Either the cloth was owned by him for his individual use, perhaps to be worn as a uniform, or was allocated to him for some other reason. It is important to note that all goods recorded in the palace warehouses are the king's property. If *e-qe-si-ja* was a material worn or used by *e-qe-ta,* then the cloth should be understood as a type of gift (to *e-qe-ta*) from the king.

If this material was a gift to *e-qe-ta,* however, why was it being stored in the palace warehouses? Deger-Jalkotzy looks to another type of fabric to explain the use (or meaning) of the *e-qe-si-ja* material. The fabric *ke-se-ne-wi-ja*, like *e-qe-si-ja,* occurs

[556] Killen 1979, 151.
[557] Deger-Jalkotzy 1978, 99
[558] Deger-Jalkotzy 1978, 103-4.

exclusively in the warehouse records. *Ke-se-ne-wi-ja* equates with */xenwia/* in Greek, or "foreign."[559] Presumably, the pattern and motifs on this fabric are foreign inspired.[560]

Two unique types of fabric are thus being stored in the king's warehouses. One is designated for *e-qe-ta;* the other is of foreign inspiration. Deger-Jalkotzy interprets these textiles in light of Knossos' function as the trade center for the kingdom. The palace warehouses are simply storage areas for the palace trade goods. Consequently, the fine fabrics *e-qe-si-ja* and *ke-se-ne-ji-wa* are export materials. The *ke-se-ne-ji-wa* fabric would have appealed to foreigners abroad. [561] The *e-qe-si-ja* fabric, on the other hand, would not have left the kingdom. The role of *e-qe-ta* as the king's communiqué is an important consideration here. The king entrusted the *e-qe-si-ja* cloth to *e-qe-ta,* so that it may be delivered as gifts to the periphery of the kingdom.[562] One can imagine *e-qe-ta* as a type of ambassador, appeasing the indigenous population with this fine fabric, or rewarding its fealty. This same official might easily have boarded a seafaring ship, to protect and deliver a cargo of "gift exchange" to a foreign palace.

Non-Greeks occupied sensitive posts in the Mycenaean world. Non-Greeks were protecting the borders of the kingdoms and it appears, were also shipping essential eastern Mediterranean resources to the Aegean. The organization of help that was not

[559] Deger-Jalkotzy 1978, 100.
[560] Deger-Jalkotzy 1978, 104.
[561] Deger-Jalkotzy (1978, 104) argues that the foreign inspired *ke-se-ne-ji-wa* fabric would have also served as gifts to visiting dignitaries.
[562] Deger-Jalkotzy 1978, 105.

Mycenaean, and the supervision of the non-Mycenaeans who were occupying sensitive posts, could have been within the jurisdiction of *e-qe-ta.*

E-qe-ta were among the highest-ranking officials in the Mycenaean administration. Does the Mycenaean assemblage on board the Uluburun ship speak of such imposing figures? And would such powerful figures have risked life and limb on a journey that may have extended a year or more? If we are uncomfortable with assigning this pair as *e-qe-ta*, they may well have answered to the powerful official. Perhaps they were akin to the highest-ranking "watchers" of the *o-ka* tablets. *E-qe-ta* may have stationed the most elite "watchers" onto foreign ships, to supervise and protect both the eastbound delivery of cargo to a palace or emporium in the eastern Mediterranean, as well as the reciprocating cargo of "gift exchange" back to the Aegean.

In sum from chapters VI and VII, four bodies of evidence were helpful in determining the social rank and occupation of the Mycenaeans on board the Uluburun ship. 1) The data from the Uluburun shipwreck. 2) The gift inventories of the Amarna Tablets. 3) Burials in the Mycenaean Aegean. 4) The Linear B archives.

The conspicuous absence of bulk Mycenaean cargo on board the ship, coupled with Cline's observation that the cargo is a virtual cross section of exotic objects identified in the Late Bronze Age Aegean, suggests the ship was en route to the Mycenaean world. The enormous haul of metal and fineries in the ship's cargo mirrors the inventories of

"gift exchange" recorded in the Amarna Letters. The Uluburun ship was, therefore, en route to the Mycenaean world with a cargo meant for "gift exchange."

The sum of the personal effects, and the origins of the ship's anchors, suggest a Semitic origin for some of the men on board the ship (either Syrian or Cypriot). Mycenaean weaponry, tools, jewelry and utilitarian pottery suggest two Mycenaeans accompanied the Near Eastern men. Pulak's study of the pan balance weights recovered from the Uluburun shipwreck has identified weight sets of exclusively Semitic origin. The absence of a weight set of Aegean standard, coupled with the occurrence of weapons (swords) of the Mycenaean military aristocracy, suggests the Mycenaeans were not assuming a merchant role on board. Their non-merchant status, however, should not exclude the possibility that the Mycenaeans were involved in the sailing and maintenance of the ship. The Aegean-type chisels recovered from the shipwreck suggest the Mycenaeans had provisionally joined the Near Easterners in the responsibilities of seafaring.

A discussion of the Mycenaean object types recovered from the shipwreck revealed a pattern of fineries, including a drinking service, amber and glass relief jewelry, bronze razors and two swords. The pair of swords, coupled with numerous spear points and two knives that may have been used as weapons, suggests these men were a martial presence on board the ship. The sum of their personal effects, when compared to the grave

assemblages of the most elite "simple burials" in the Aegean world, speaks of members of the Mycenaean elite.

An important clue to their role on board the ship is the cargo itself. The "gift exchange" cargo, coupled with the exceptional status of the Mycenaeans on board, suggests these men were representatives of a Mycenaean palace, returning to the Aegean with a reciprocated cargo of "gift exchange."

I propose that an official in the Linear B archives titled *e-qe-ta* may have fulfilled such a role. It seems the most important duty of *e-qe-ta* is to insure the palace's interests at the kingdom's periphery. The military bearing of *e-qe-ta,* coupled with his diplomatic attributes, would have made him well suited to carry out a mission of "gift exchange" on board a foreign ship. If these men were not *e-qe-ta*, they may have been high ranking minions of *e-qe-ta*, akin to the most elite "watchers" of the *o-ka* tablets.

CHAPTER VIII

CONCLUSION: IMPLICATIONS FOR TRADE RELATIONS BETWEEN THE MYCENAEAN AEGEAN AND ORIENT

The Uluburun ship sailed within a political and economic system that joined the entire eastern Mediterranean. Greeks were initiated into this system in LH I, when, for the first time, Early Mycenaean elites gained access to non-Helladic luxuries. Through these items, the emerging elites on the Greek mainland were legitimizing their rule by what has been termed "conspicuous consumption and display."[563] This ostentation was endemic to all Bronze Age palatial polities, though the (non-palatial) LH I-II Greeks were particularly dependent on foreign luxuries. The Early Mycenaeans were not yet capable of the superior craftsmanship of their more sophisticated neighbors in the eastern Mediterranean. Such craftsmanship could only be accessed through foreign contact.

The sudden inundation of Minoan and foreign luxuries in the elite LH I-II burials, particularly the shaft graves of Mycenae, should be viewed in light of trade relations between Greece and Crete. The Early Mycenaeans had access to a resource that enabled them to trade with the Minoans. Dickinson and Muhly have long argued that the Early Mycenaeans had initiated contact with European parties, who were the exploiters of tin

[563] Sherratt and Sherratt 1991, 359.

resources (either in central Europe or Cornwall/Brittany). Trade relations with the Minoans were inspired by Mycenaean access to tin. These relations were made manifest in the LH I-II burials.

I have offered another scenario, whereby the Early Mycenaeans were exploiting the copper resources of the Attic mines of Laurion. The mineral hungry Minoans would have been just as eager to initiate relations with the Mycenaeans for Laurion copper, as for European tin. Through these trade relations, the Minoans were wholly responsible for introducing their simple Greek neighbors to the sophisticated world of palaces and interregional trade. Consequently, all interregional trade to the Aegean in this period probably took place in Minoan hulls, and in foreign ships visiting Minoan emporia.

A proliferation of LH IIIA2 ceramics across the eastern Mediterranean marks the arrival of the Mycenaeans as a trade power. Here we confront the fundamental question of this thesis. Were Mycenaean ships delivering these wares to Cyprus, Syro-Palestine, and Egypt? Cline suggests that Mycenaean, Cypriot, Syro-Palestinian and Egyptian merchant ships were all sailing the eastern Mediterranean. Cline, however, has made the problematic assumption that merchants can be identified by the wares they were delivering. In other words, since Egyptian or Cypriot objects are appearing in the Aegean, Egyptian or Cypriot merchants must also have visited. Likewise, the quantities of Mycenaean ceramics on Cyprus, Syro-Palestine, and Egypt identify Mycenaean merchants visiting there. The regional diversity of the cargo and personal effects of the

Uluburun ship, including objects from the Baltic, the Aegean, Cyprus, Mesopotamia, Syro-Palestine, Egypt and Nubia should have dissuaded Cline from these direct associations.

Chapter IV explored all proposed evidence for Mycenaean merchant activity in the greater eastern Mediterranean and in the Aegean. No persuasive argument has yet been put forth for Mycenaean merchants in the greater Levant, though two letters of Hattusili III describe *Ahhiyawan* messengers who were not fulfilling their "gift giving" obligations to the Hittite king. Mycenaean messengers (who may or may not have been acting like their messenger-merchant counterparts in the Near East) were clearly visiting foreign courts.

An investigation of merchant activity in the Mycenaean Aegean began with the Linear B archives. The archives have been notoriously silent on issues related to interregional trade, until Killen's recent observations. Killen has identified an individual titled *ku-pi-ri-jo* (the Cypriot), who may have organized trade between the Mycenaean palace and the administration. Killen argues he was a Mycenaean "collector" in the palatial administration. I introduced the possibility he may be Cypriot—and had assumed the role of a collector. Regardless, the palatial archives point to direct trade relations with the Cypriots (and to no other eastern Mediterranean power).

The textual evidence is substantiated by recent archaeological observations made by Hirschfeld. Hirschfeld has drawn our attention to Cypriot marked Mycenaean export jars at Tiryns. She argues Cypriot agents were on Greek soil, marking this Mycenaean pottery for export to Cyprus. Clearly, Cypriot merchants were visiting Mycenaean ports. This trade may have been orchestrated by individuals titled *ku-pi-ri-jo* (the Cypriot).

Direct trade relations between Cyprus and the Mycenaean Aegean have been axiomatic in Bronze Age scholarship for half a century. Cyprus has produced more exported Mycenaean pottery than Syro-Palestine and Egypt combined. Yannai has generated the most compelling and exhaustive study of Cypro-Mycenaean trade to date. She describes Cypriot merchants who were entirely responsible for joining Cyprus to the Mycenaean Aegean. The conspicuous dearth of evidence for Mycenaean merchant activity, coupled with the minimal cultural impression left on Syro-Palestine and Egypt by the Mycenaeans, suggests to Yannai that Cypriot merchants rather than Mycenaean were responsible for delivering the large quantities of LH IIIA-B pottery to the eastern Mediterranean.

The evidence for Mycenaean merchant activity is scant at best, and a singular discovery could drastically alter our current understanding of interregional relations. Regardless, having reviewed evidence and hypotheses available for Mycenaean interregional trade, I wish to place the Uluburun ship within the matrix of trade relations between the Mycenaean Aegean and greater eastern Mediterranean.

Late LH IIIA2 and Early LH IIIB utilitarian pottery has been recovered from the shipwreck. The Uluburun ship was, therefore, sailing at the height of Mycenaean export to the eastern Mediterranean. The last port of call for the Uluburun ship was probably Cyprus. Large Cypriot pithoi filled with ceramics and 10 tons of Cypriot copper was recovered from the wreck. The homeport of the ship may never be conclusively determined, though the bulk of the personal effects and the origins of its anchors suggest Cyprus or Syro-Palestine.

A strong case can be made for the Mycenaean destination of all or some of the ship's cargo. Trade relations between Cyprus and the Mycenaean Aegean have been persuasively demonstrated in the archaeology and texts of the Mycenaeans. We have less evidence for Syro-Palestinian-Mycenaean trade relations (nothing on the Aegean end), although Ugaritic texts describe a powerful Ugaritic merchant named Sinaranu visiting Crete in middle to late LM/LH IIIB. Cypriot voyages to the Mycenaean Aegean were probably more regular than those from Syro-Palestine. Consequently, I (tentatively) favor a Cypriot origin for the Uluburun ship, which was en route to the Aegean.

The Uluburun ship was hauling a cargo that mirrors in many respects the "gift exchange" inventories of the Amarna Letters. If the homeport of the Uluburun ship was Cyprus, we are left with one of two possibilities. Either a Cypriot center had sent forth

this high level correspondence to a Mycenaean palace, or the Cypriot ship was acting as an intermediary (or middleman). As middlemen, the Cypriot crew may have been in charge of the more commercial elements of the ship's cargo (the pottery and perhaps the metal). The Mycenaeans, on the other hand, may have been escorting the "gift exchange" component of the cargo, which was delivered from any one of a number of palace centers in the eastern Mediterranean. Why were well-armed and high ranking Mycenaeans on board this ship?

For over three decades, George Bass has emphasized the paucity of evidence for Mycenaean merchant activity in the Aegean and greater Levant.[564] He and Yannai share the severe view that the Mycenaeans did not contribute ships to trade between the two regions. The negative evidence mounted against Mycenaean merchants is certainly impressive. Should negative evidence, however, be used to support such uncompromising scenarios?

The troubling silence of the Linear B archives may be attributed to merchant activity that operated beyond the administration of the Mycenaean palace. In chapter V, I had reviewed evidence and hypothesis for privately sponsored merchants seeking profits in the eastern Mediterranean. Perhaps a merchant class existed in the Mycenaean Aegean.

We should not exclude the possibility that Mycenaean adventurers were seeking profits in the greater Levant. I am not convinced, however, that the palaces would have

[564] Bass 1967, 164-8; 1973, 36; 1991, 73-4; 1997, 83-5; 1998, 184-7.

tolerated a thriving class of commercial, uninstitutionalized merchants within their kingdoms. The palaces and their administrations acted as the redistribution centers of the Mycenaean world. Consequently, we should expect the administration to exert its influence on the most important trade networks joining the Aegean to the greater Levant—namely the trade in metals and fineries of elite manufacture. This observation should not exclude the possibility that the Mycenaean palaces were engaging with foreign, profit-seeking merchants. Yannai and Sherratt have argued persuasively that Cypriot entrepreneurs dominated the trade routes that joined the Mycenaean Aegean to the greater Levant.

If the palaces were engaged in the import of foreign commodities, why are the texts recording this activity so elusive? The Minoans probably used leather as a writing material,[565]and Shelmerdine raises the possibility that the Mycenaeans were similarly writing on a perishable medium, which would not have survived the conflagration that preserved the clay tablets.[566] Wachsmann has also suggested, following observations by Uchitel on Near Eastern texts, that the Linear B archives related to trade and foreign contact were treated separately from other administrative concerns. Economic texts at both Boghazkoy and Nineveh were probably kept on a perishable medium, like leather or wood.[567]

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[565] Weingarten 1983, 8-13.
[566] Shelmerdine 1998, 293. Other scholars have also suggested the Mycenaeans were writing on a perishable material, including Chadwick (1976, 27-8) and Aravantinos (1990, 151 n. 10, pl. 24a).
[567] Wachsmann 1998, 154; Uchitel 1988, 21-22.

The absolute silence of trade related concerns in the Linear B texts, however, has been broken by Killen's recent observations on *ku-pi-ri-jo* (as an official administering Cypriot trade). Significantly, *ku-pi-ri-jo* does not appear to be a merchant. Killen's observations lessen the likelihood that the administration of trade was treated separately from other concerns (ie they were not recorded on perishable mediums).

Where then, are the Mycenaean records for the lading and the unlading of seagoing cargoes? After raising the possibility that the Mycenaeans may have kept their records of trade on leather or some other perishable material, Shelmerdine asks, "Or did the Mycenaean state administrations simply play little part in carrying out the trading expeditions from which they benefited?"[568]

My review of Late Helladic interregional trade has led me, inescapably, to side with Bass in doubting the existence of a significant Mycenaean merchant fleet. I hope that I have demonstrated that the Minoans were responsible for joining the LH I-II chiefdoms to the greater Levant. Should we assume that with the collapse of Minoan civilization, the Mycenaean palaces had built from nothing a fleet of seafaring merchantmen, and

[568] Shelmerdine 1998, 293.

had begun to sail the eastern Mediterranean? The most explicit evidence for Mycenaean seafaring (namely the "Rowers Tablets" and the galley representations) points to ships of war, not trade.

I do not believe the Mycenaean palaces built and sailed a merchant fleet. Privately sponsored merchants may have existed in the Aegean, though their contribution to the gross volume of trade between the Aegean and greater Levant was secondary to the enterprise of foreign merchants.

Our most vivid Bronze Age representation of a port being visited by a foreign merchant comes to us from the 18th Dynasty Egyptians. A painting in the tomb of Kenamun (under Amenhotep III) is divided into 3 scenes—left to right.[569] The first depicts 4 crescentic-hulled ships (Figure 14). The second scene is divided into two registers showing 7 ships anchored at an Egyptian port. The third scene is divided into 3 registers—capturing stevedores offloading cargo. The most prominent figures in these representations are robed and bearded men—the Syrian merchants of these ships (Figure 15).

Bass has emphasized this scene and others in Egyptian iconography, including Syrians presenting objects of seafaring trade (metal and glass ingots, Canaanite jars).[570] He has

[569] Wachsmann 1998, 42, fig. 3.2.
[570] Bass 1998, 186-7.

been persistent in reminding scholarship that Mycenaeans are nowhere represented as merchants or gift givers in Egyptian art. Consequently, Bass favors Semitic merchants as the trade medium between the Mycenaean Aegean and Levant. I am inclined to agree with Yannai and Sherratt. These Semitic merchants were predominantly Cypriot, though Syrians were also avisiting the Mycenaean Aegean. This should not exclude the possibility that an occasional Egyptian sailed to Greece. Nor should it exclude the possibility of occasional Mycenaean merchants visiting foreign shores. I do not believe, however, that these were regular trade phenomena.

Semitic merchants had likely begun visiting the Aegean long before the ascendancy of the Mycenaeans. Their destination was Minoan Crete. With the collapse of Minoan civilization, Semitic merchants likely rerouted, and had begun to include the Greek mainland into the circuit of interregional trade.

We should expect the Mycenaean palace, with no merchant fleet of its own, to take measures in safeguarding the most important commerce between the Aegean and greater eastern Mediterranean. I propose the heavily armed Mycenaeans on board the Uluburun ship were performing just such a duty. They may have been *e-qe-ta* of the Linear B archives, or under the command of *e-qe-ta.* They may have also been the Mycenaean equivalent of the "messengers" of the Amarna Letters, relaying the well wishes and grievances of their *wanax* to his counterpart in "gift exchange." We can only speculate regarding their title. The presence, however, of high-ranking Mycenaean warrior-types

on board a Near Eastern ship, offers us a compelling glimpse of trade between the Late Bronze Age Greek and Semitic worlds.

Trade relations between the two regions, or trade perceptions rather, are described poignantly in Homer. Bass reminds us that the seafaring merchants are exclusively Phoenician in the Odyssey[571] Additionally Homer's prejudices against merchants in general, and Phoenicians in particular, are striking. A brazen young Phaeacian in Book VIII hurls an insult at Odysseus. Euryalos taunts the hero: "No, stranger, I would not say you were like a man skilled in contests of the many sorts that exist among men, but are like one who is used to a ship with many oarlocks, a leader of sailors who are also merchantmen with his mind on a load, an overseer of cargoes and of gain got by greed."[572]

In Book XIV, Odysseus describes a Phoenician as "skilled in deceits, a sharp dealer who had worked many evils among men."[573] In Book XV Eumaeus the swineherd describes some Phoenicians as "men who are famous for ships, sharp dealers, who brought in a black ship countless trinkets."[574]

Homer's explicit contempt for the Phoenecian merchant, and merchants in general, reveals a deep animosity for commercial life in the Greek psyche. Even if Homer is

[571] Bass 1997, 71-101.
[572] *Odyssey*, 102.
[573] *Odyssey*, 193.
[574] *Odyssey*, 211.

exposing the mind of an Iron Age Greek, the contempt for commercial life seems so deeply seated, and so accute, so as not to appear a recent formulation.

Perhaps we are glimpsing this peculiar Mycenaean worldview on board the Uluburun ship. If these Mycenaeans were performing the role I have assigned them, they have entered the stage of interregional trade as guardians of the cargo and not merchants. Further, their very presence on board the ship belies some apprehensions of the Mycenaean administration. The heavily armed Mycenaeans on board the Uluburun ship were a defense against piracy, and perhaps also, the deceit of a commercial people.

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APPENDIX A

Figures

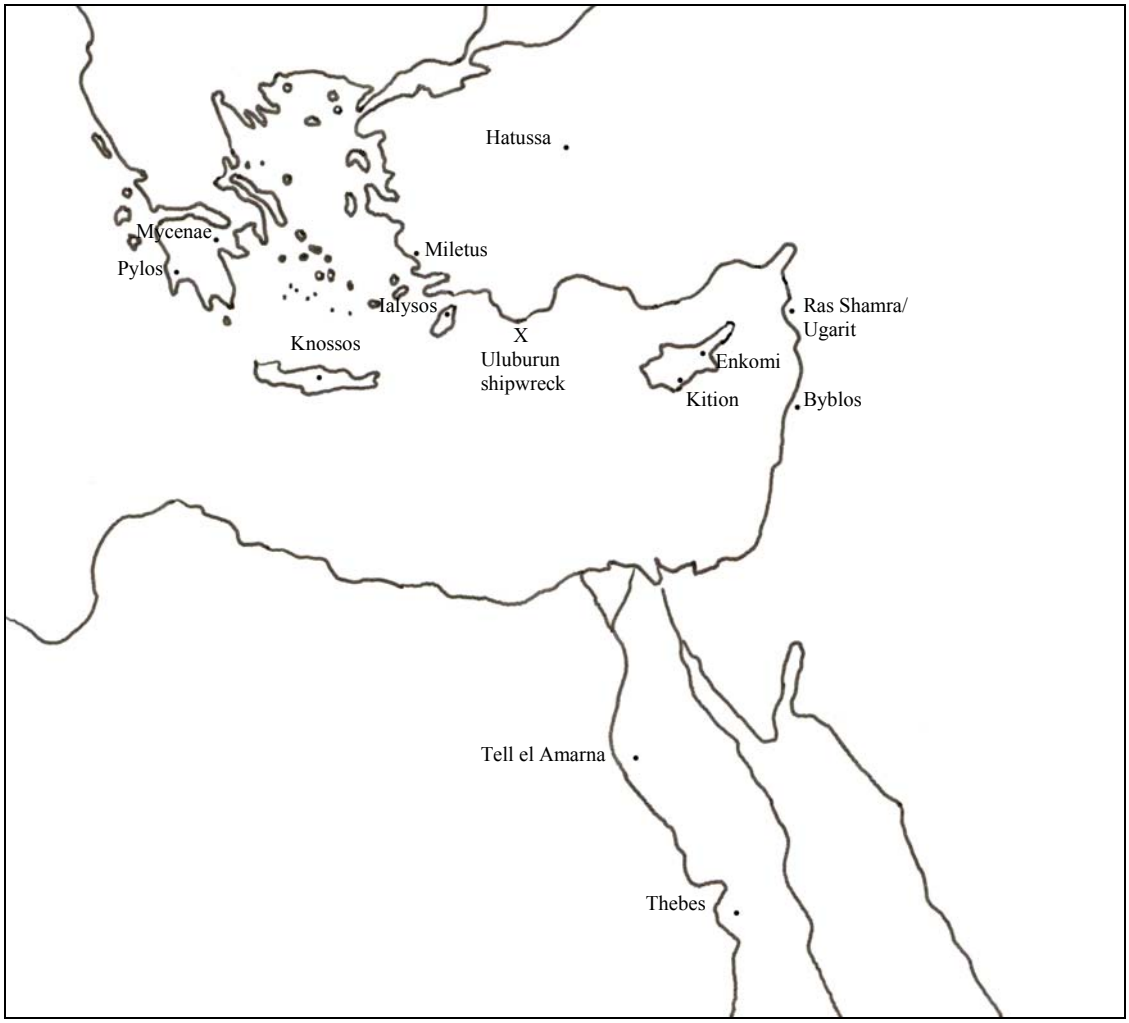

Figure 1. Important sites and centers in the Late Bronze Age eastern Mediterranean (Map: C. Bachhuber).

Figure 2. Sites in the Minoan Aegean tied to trade and metallurgy (Map: C. Bachhuber).

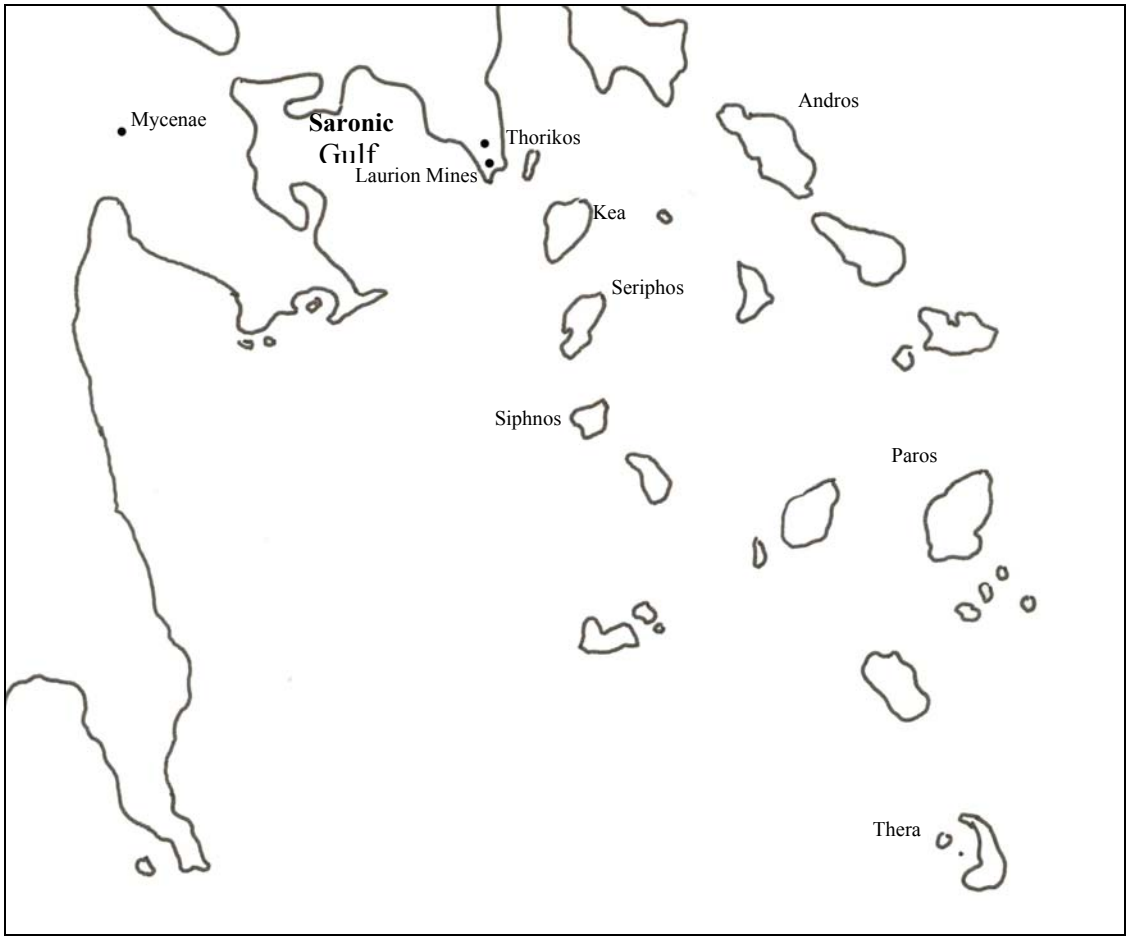

Figure 3. The Cyclades and the Bronze Age Aegean trade in metals (Map: C. Bachhuber).

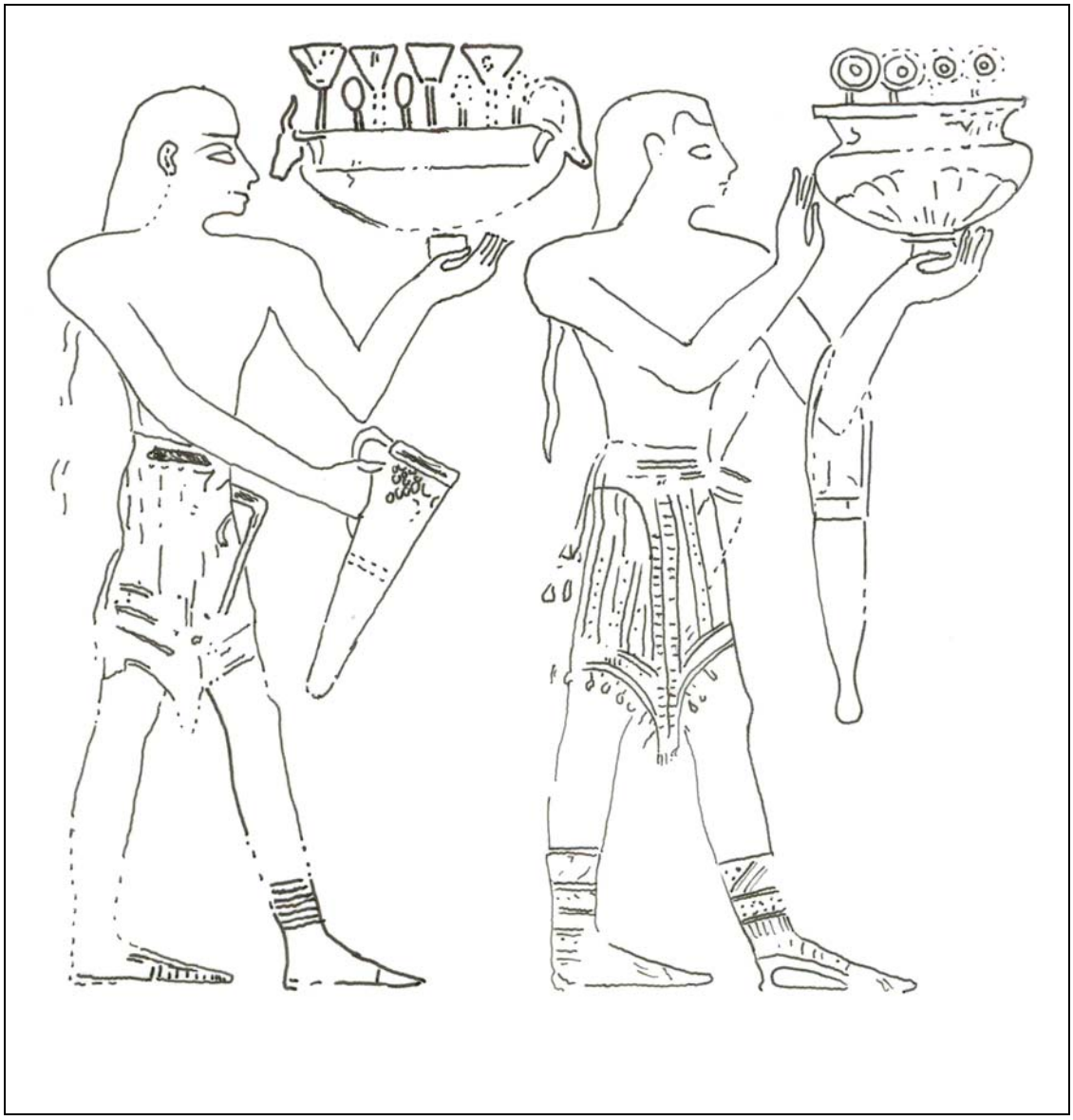

Figure 4. Minoans in the tomb of Rechmire announced as "the chiefs of (the) Keftiu-land (Crete) and the islands which are within the Great Sea…" (after Davies 1943, pl. 18).

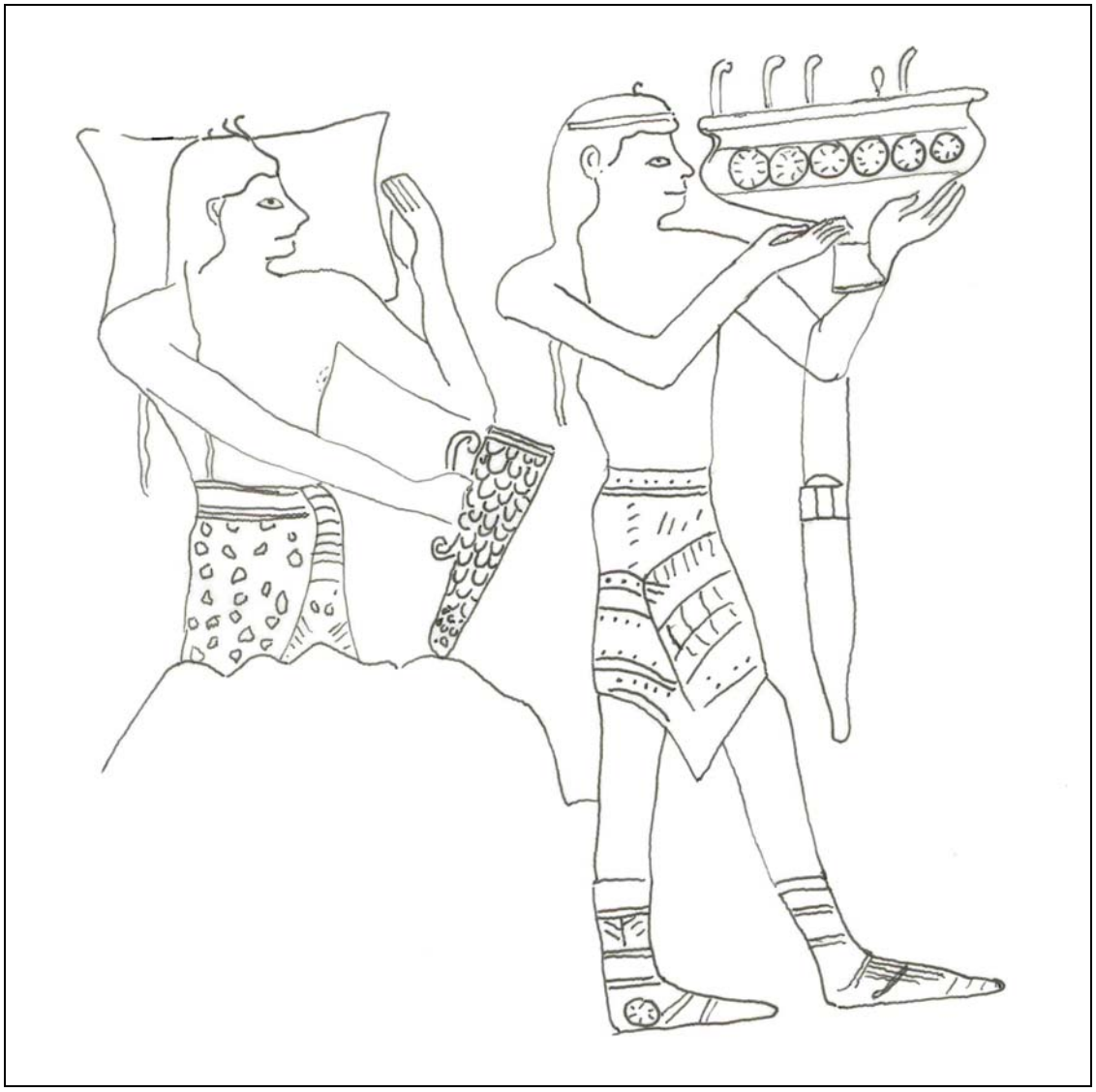

Figure 5. Minoans in the tomb of Rechmire repainted to wear kilts (drawing by author, source after Davies 1943, pls. 18-20).

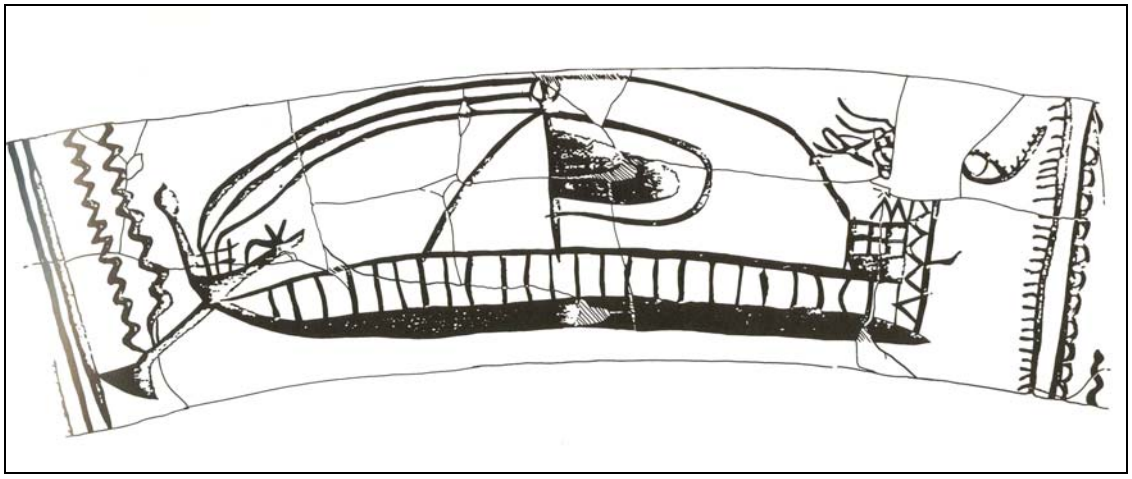

Figure 6. Ship representation on an LH IIIC pyxis from Pylos (showing horizontal ladder motif) (from Wachsmann 1998, 135, fig. 7.17).

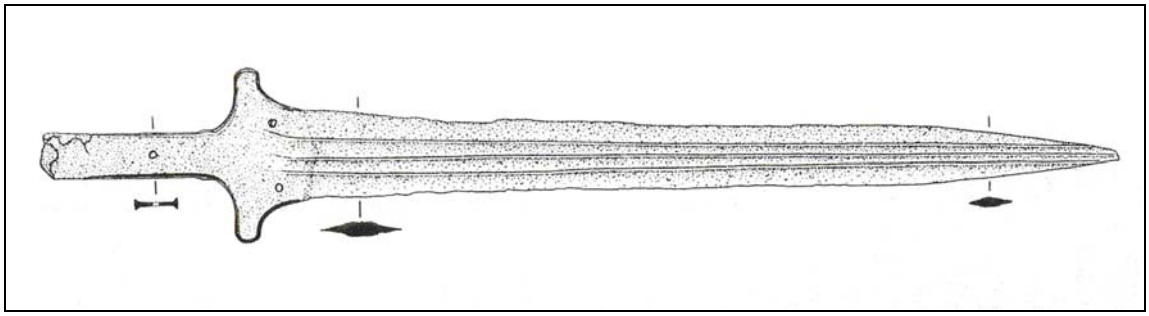

Figure 7. Sandar's type Di sword (l. .455) recovered from the Uluburun shipwreck (from Pulak 1988, fig. 21).

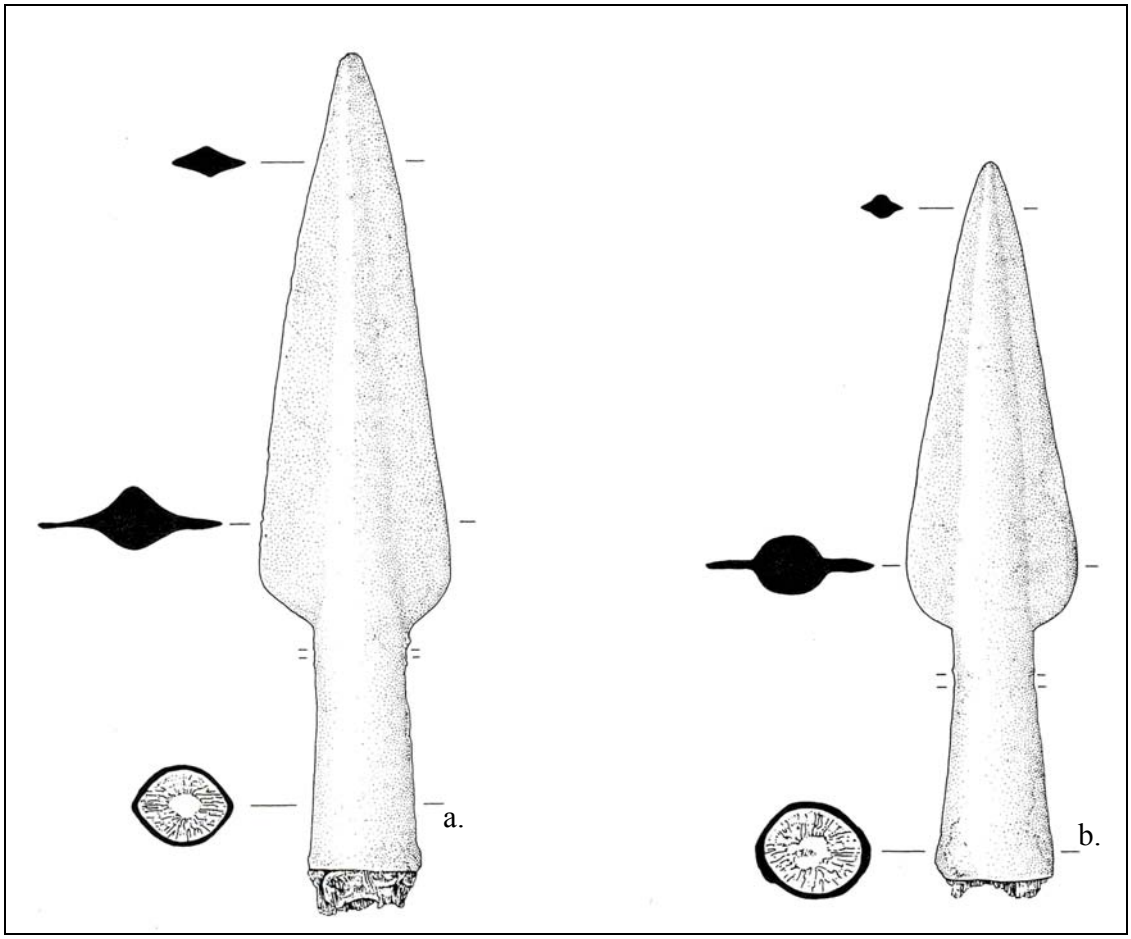

Figure 8. Avila's Type VI a) Variant A (l. .23), b) Variant "with short broad blade" (l. .202) spear points recovered from the Uluburun shipwreck (from Pulak 1997, fig. 23).

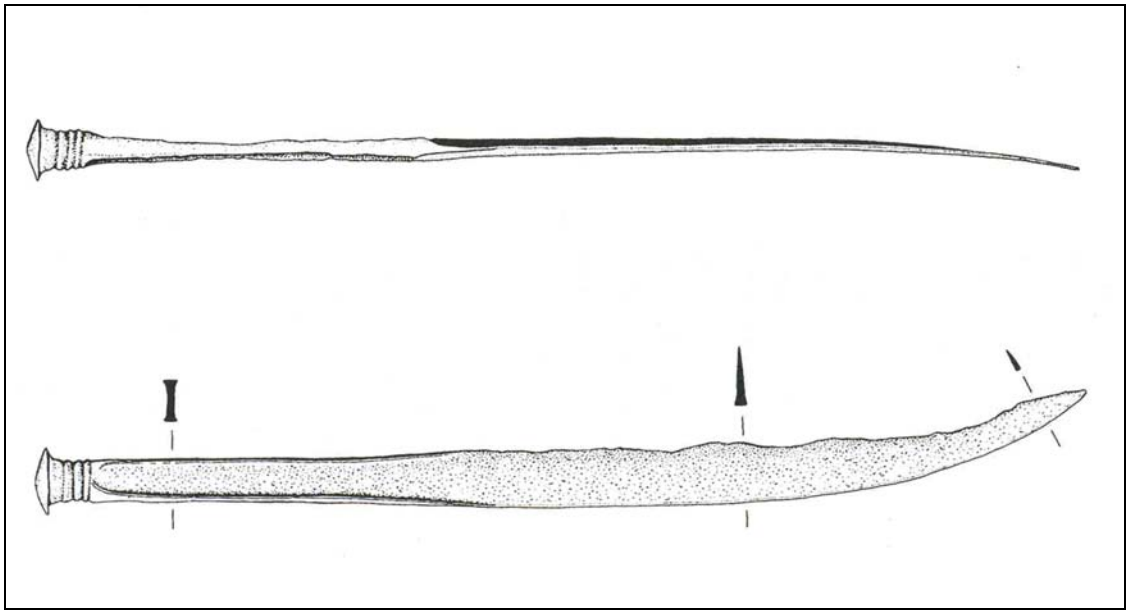

Figure 9. Mycenaeanizing knife (l. .23) recovered from the Uluburun shipwreck (after Bass et al. 1989, fig. 10).

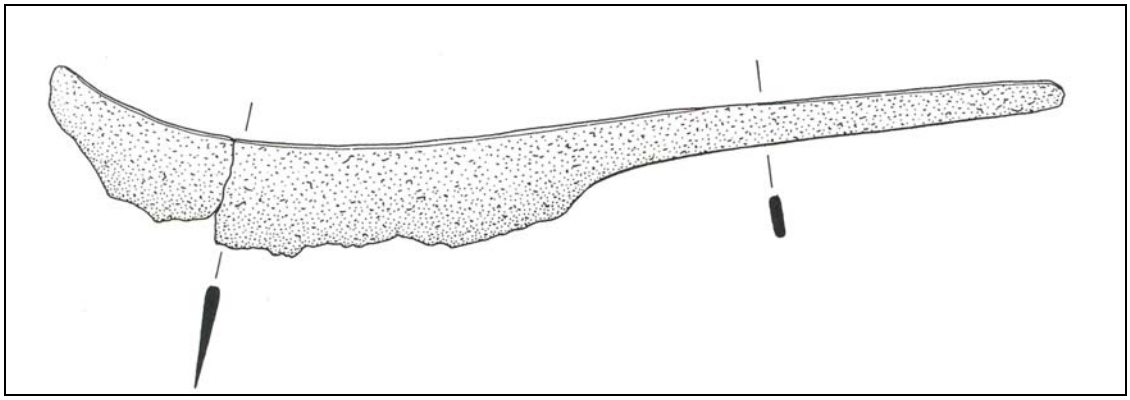

Figure 10. Weber's Type IV variant IVb razor (l. .19) recovered from the Uluburun shipwreck (after Bass 1986, ill. 33).

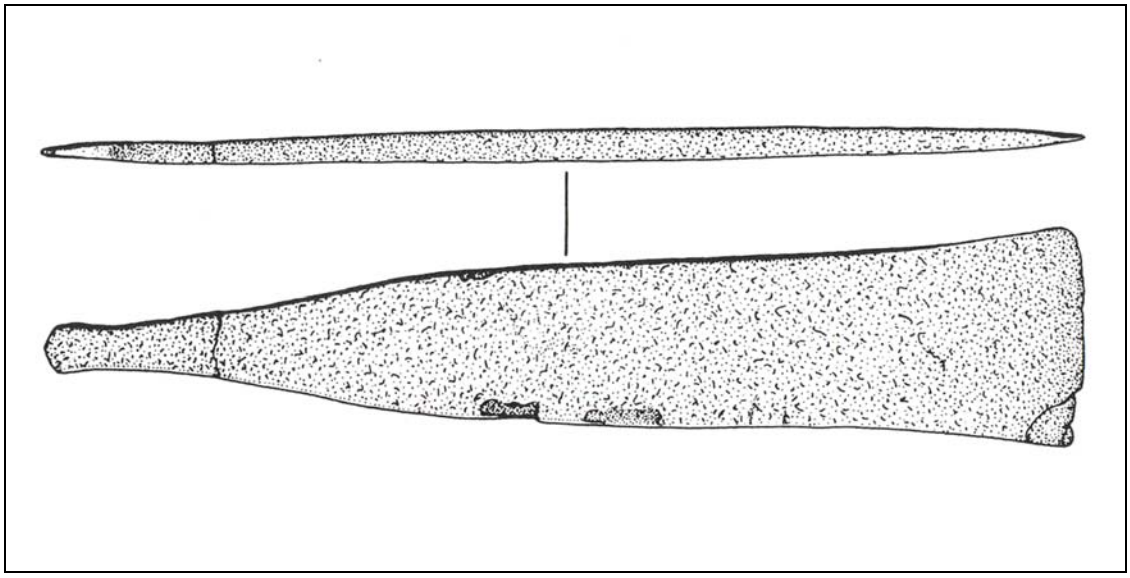

Figure 11. Deshaye's chisel Subtype C3 (l. .201) recovered from the Uluburun shipwreck (from Pulak 1988, fig. 14).

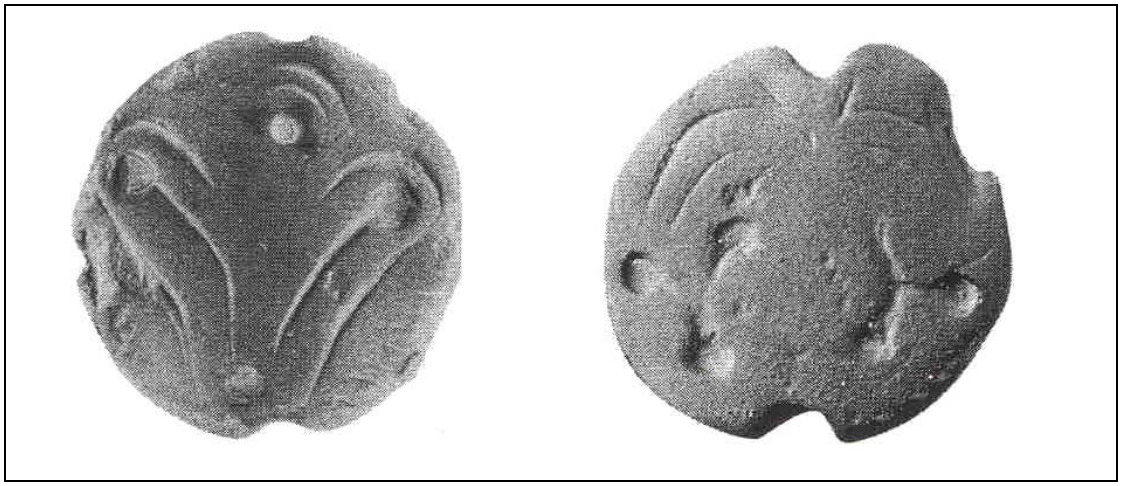

Figure 12. Younger's "Mainland Popular Group" seal (l. .018) recovered from the Uluburun shipwreck (after Dickers 2001, ta. 24.5).

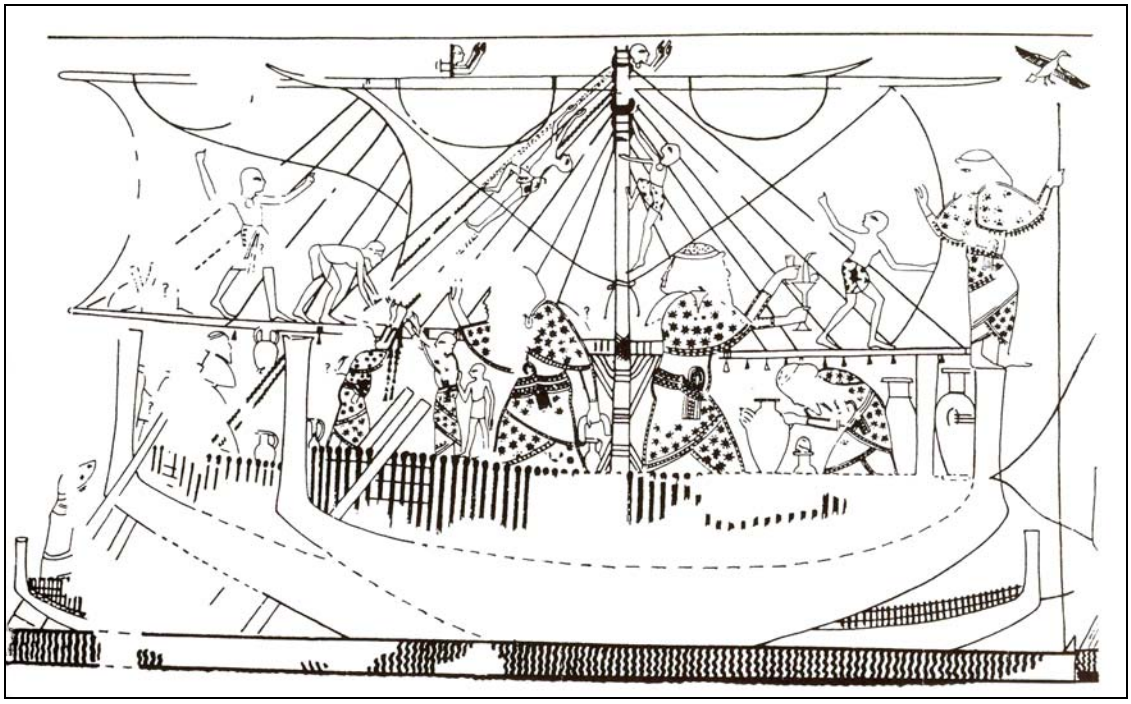

Figure 13. Scene from the tomb of Kenamun showing Syrian ships visiting an Egyptian port (from Wachsmann 1998, fig. 3.3).

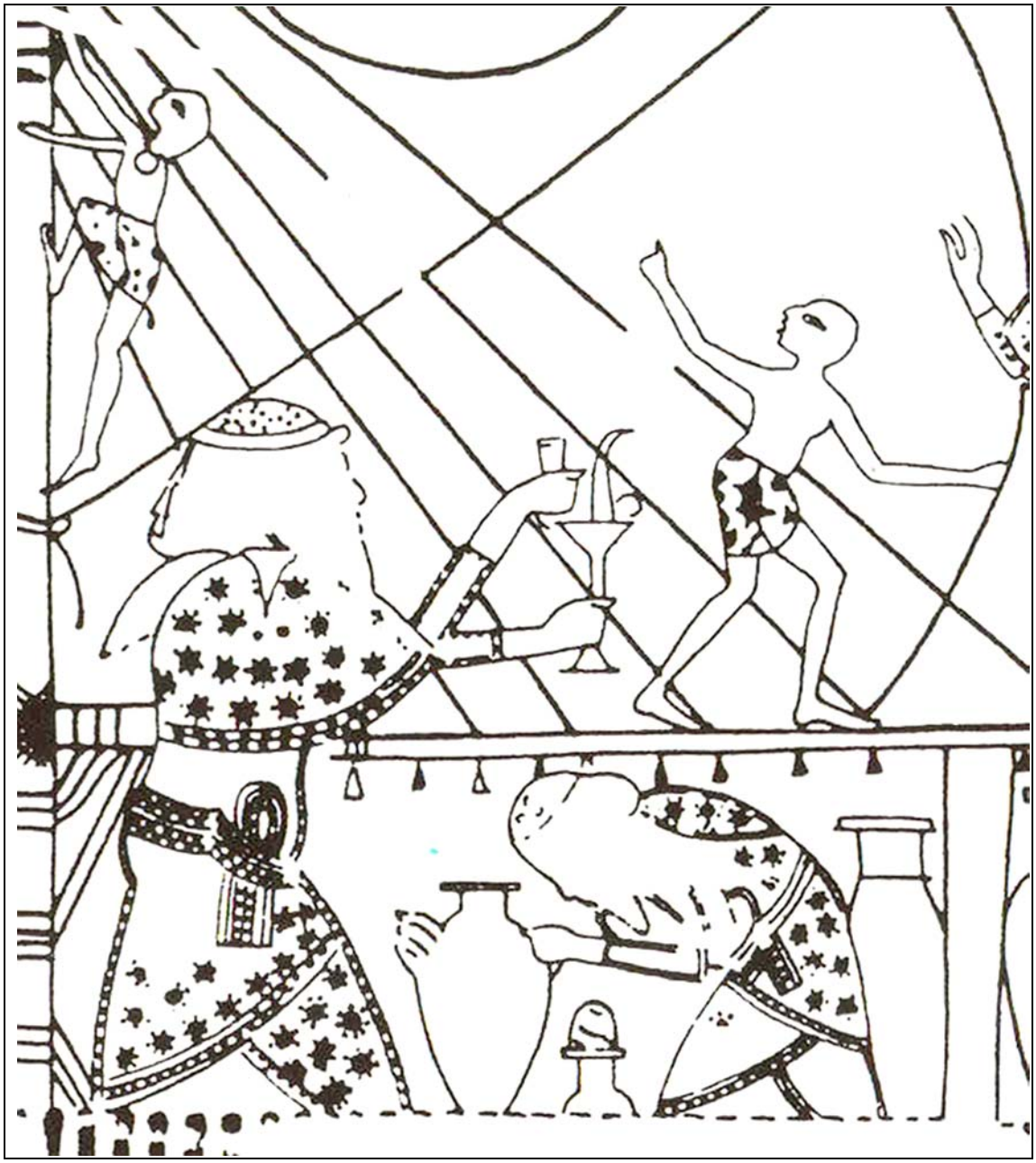

Figure 14. Close up of bearded and robed Syrian merchants from the tomb of Kenamun (from Wachsmann 1998, fig. 3.4).

Table 1. The Aegean Pottery recovered from the Uluburun shipwreck.
*Rutter does not assign a date to the Minoanizing stirrup jars

Catalogue number	Form	Date
kw57	Kylix	Early LH IIIA2
kw88	Small to medium stirrup jar	LH IIIA2
kw118	Large stirrup jar	*Minoanizing
kw137	Small to medium stirrup jar	LH IIIA2
kw305	Small to medium stirrup jar	LH IIIA2
kw171	Small to medium stirrup jar	LH IIIA2
kw308	Small to medium stirrup jar	LH IIIA2
kw334	Teacup	LH IIIA2
kw725	Beaked jug	Early LH IIIA2
kw790	Large stirrup jar	*Minoanizing
kw1188	Large stirrup jar	*Minoanizing
kw1198	Large stirrup jar	*Minoanizing
kw1429	Large stirrup jar	*Minoanizing
kw1470	Large stirrup jar	*Minoanizing
kw1977	Large stirrup jar	*Minoanizing
kw1995	Dipper	LH IIIA2
kw2405	Small to medium stirrup jar	LH IIIA2
kw2588	Round-mouthed jug	LH IIIA2-B
kw3323	Pilgrim flask	LH IIIA2
kw3981	Small to medium stirrup jar	LH IIIA2
kw5457	Large stirrup jar	*Minoanizing
kw5520	Large stirrup jar	*Minoanizing
kw5568	Large stirrup jar	*Minoanizing

Table 2. The Mycenaean swords recovered from the Ulubururun shipwreck.

Catalogue number	Type
kw301	Sandar's type Di
kw4193	Sandar's type Di

Table 3. The Mycenaean spearpoints recovered from the Uluburun shipwreck.
*too eroded for identification

Catalogue Number	Type
kw30	Avila's Type VI
kw78*	?
kw120	Avila's Type VI
kw309	Avila's Type VI
kw360	Avila's Type VI
kw764	Avila's Type VI
kw1494	Avila's Type VI
kw1520*	?
kw1874*	?
kw4885	Avila's Type VI

Table 4. The Aegean-type knives recovered from the Uluburun shipwreck
*blends attributes of two Aegean-type knives

Catalogue number	Type
kw3199	*
kw4452	*

Table 5. The Mycenaean razors recovered from the Uluburun shipwreck.
*too eroded for identification

Catalogue number	Type
kw142	Weber's Type IV variant IVb
kw274	*
kw749	Weber's Type IV variant IVb
kw1466	*

Table 6. Aegean type chisels recovered from the Uluburun shipwreck.

Catalogue number	Type
kw264	Deshayes' Subtype C3a
kw270	Deshayes' Subtype C3b
kw282	Deshayes' Subtype C3b
kw376	Deshayes' Subtype C3b
kw423	Deshayes' Subtype C3b

Table 7. The Mycenaean glass relief beads recovered from the Uluburun shipwreck.

Catalogue number	Type
kw829	Figure of 8 shields
kw3129	Spiraled circular boss
kw3360	Spiraled circular boss
kw3366	Figure of 8 shields
kw3498	Figure of 8 shields
kw3785	Spiraled circular boss
kw4856	Spiraled circular boss
kw5470	Spiraled circular boss
kw5531	Spiraled circular boss
kw5532	Spiraled circular boss
kw5556	Spiraled circular boss
kw5753	Figure of 8 shields
kw5834	Spiraled circular boss
kw5835	Figure of 8 shields
kw5842	Spiraled circular boss

Table 8. The Mycenaean faience beads recovered from the Uluburun shipwreck.

Catalogue number	Type
kw297	amygdaloid
kw312	amygdaloid
kw478	amygdaloid
kw538	amygdaloid
kw782	amygdaloid
kw1945	amygdaloid
kw2441	amygdaloid
kw2823	amygdaloid
kw3180	amygdaloid
kw3220	amygdaloid
kw3227	amygdaloid
kw3236	amygdaloid
kw3240	amygdaloid
kw3264	amygdaloid
kw3305	amygdaloid
kw3306	amygdaloid
kw3307	amygdaloid
kw3308	amygdaloid
kw3309	amygdaloid
kw3310	amygdaloid
kw3406	amygdaloid
kw3408	amygdaloid
kw3412	amygdaloid
kw3419	amygdaloid
kw3446	amygdaloid
kw3487	amygdaloid
kw4392	amygdaloid
kw3502	amygdaloid
kw3509	amygdaloid
kw3510	amygdaloid
kw3511	amygdaloid
kw3513	amygdaloid
kw3514	amygdaloid
kw3515	amygdaloid
kw3516	amygdaloid
kw3517	amygdaloid
kw3518	amygdaloid
kw3520	amygdaloid
kw3527	amygdaloid
kw3528	amygdaloid
kw3529	amygdaloid
kw3530	amygdaloid
kw3531	amygdaloid

Table 8. Continued.

Catalogue number	Type
kw3546	amygdaloid
kw3547	amygdaloid
kw3548	amygdaloid
kw3549	amygdaloid
kw3550	amygdaloid
kw3551	amygdaloid
kw3552	amygdaloid
kw3553	amygdaloid
kw3560	amygdaloid
kw3561	amygdaloid
kw3562	amygdaloid
kw3563	amygdaloid
kw3564	amygdaloid
kw3566	amygdaloid
kw3567	amygdaloid
kw3568	amygdaloid
kw3569	amygdaloid
kw3570	amygdaloid
kw3571	amygdaloid
kw3572	amygdaloid
kw3590	amygdaloid
kw3591	amygdaloid
kw3592	amygdaloid
kw3593	amygdaloid
kw3594	amygdaloid
kw3595	amygdaloid
kw3596	amygdaloid
kw3601	amygdaloid
kw3602	amygdaloid
kw3604	amygdaloid
kw3617	amygdaloid
kw3624	amygdaloid
kw3626	amygdaloid
kw3627	amygdaloid
kw3638	amygdaloid
kw3629	amygdaloid
kw3630	amygdaloid
kw3632	amygdaloid
kw3636	amygdaloid
kw3669	amygdaloid

Table 8. Continued.

Catalogue number	Type
kw3687	amygdaloid
kw3708	amygdaloid
kw3709	amygdaloid
kw3710	amygdaloid
kw3714	amygdaloid
kw3715	amygdaloid
kw3716	amygdaloid
kw3750	amygdaloid
kw3753	amygdaloid
kw3887	amygdaloid
kw3928	amygdaloid
kw3929	amygdaloid
kw3937	amygdaloid
kw3947	amygdaloid
kw3970	amygdaloid
kw3971	amygdaloid
kw3974	amygdaloid
kw3976	amygdaloid
kw4104	amygdaloid
kw4105	amygdaloid
kw4106	amygdaloid
kw4107	amygdaloid
kw4161	amygdaloid
kw4303	amygdaloid
kw4305	amygdaloid
kw4306	amygdaloid
kw4307	amygdaloid
kw4308	amygdaloid
kw4309	amygdaloid
kw4317	amygdaloid
kw4326	amygdaloid
kw4327	amygdaloid
kw4328	amygdaloid
kw4329	amygdaloid
kw4330	amygdaloid
kw4331	amygdaloid
kw4332	amygdaloid
kw4376	amygdaloid
kw4456	amygdaloid

Table 8. Continued.

Catalogue number	Type
kw4523	amygdaloid
kw4559	amygdaloid
kw4562	amygdaloid
kw4563	amygdaloid
kw4580	amygdaloid
kw4783	amygdaloid
kw4807	amygdaloid
kw4808	amygdaloid
kw4857	amygdaloid
kw4862	amygdaloid
kw4888	amygdaloid
kw4996	amygdaloid
kw5027	amygdaloid
kw5078	amygdaloid
kw5079	amygdaloid
kw5105	amygdaloid
kw5129	amygdaloid
kw5157	amygdaloid
kw5168	amygdaloid
kw5172	amygdaloid
kw5175	amygdaloid
kw5246	amygdaloid
kw5259	amygdaloid
kw5260	amygdaloid
kw5261	amygdaloid
kw5321	amygdaloid
kw5451	amygdaloid
kw5452	amygdaloid
kw5453	amygdaloid
kw5459	amygdaloid
kw5479	amygdaloid
kw5480	amygdaloid
kw5481	amygdaloid
kw5755	amygdaloid

Table 9. The Mycenaean amber beads recovered from the Uluburun shipwreck. *nd=no data

Catalogue number	Type
kw75	nd*
kw111	nd
kw119	nd
kw163	nd
kw281	nd
kw289	nd
kw290	nd
kw292	nd
kw293	nd
kw324	nd
kw416	nd
kw417	nd
kw418	nd
kw463	nd
kw465	nd
kw472	nd
kw490	nd
kw540	nd
kw1990	nd
kw2650	nd
kw2723	nd
kw2866	nd
kw3025	nd
kw3623	nd
kw3770	nd
kw4249	nd
kw4392	nd
kw4440	nd
kw4524	nd
kw4565	nd
kw5235	nd
kw5512	nd
kw5695	nd
kw5720	nd
kw5726	nd
kw5771	nd
kw5780	nd
kw5786	nd

Table 10. The Mycenaean seals recovered from the Uluburun shipwreck.

Catalogue number	Type
kw4855	Mainland Popular Group (animal motif)
kw134	Mainland Popular Group (triskel motif)

Table 11. Status index of Mycenaean assemblage recovered from the Uluburun shipwreck.
*all status indices are for LH IIIA-B burials with the exception of the chisel which is based on LH I-II burials

Object Type	Status Index
Sword	15
Spear Point	7
Knife	6.67
Chisel (tool)*	3
Razor (cosmetics)	8
Glass	4.5
Amber Bead	15
Faience Bead	9
Seal	7
Pottery (pouring)	3.88
Total	79.05

Table 12. Ranking of the Mycenaean assemblage from the Uluburun shipwreck with the highest status "simple burials" in Lewartowski's study.
*nd=no data

Mazaraki Zitsas: Paleokoules	LH IIIB-C(?)	NW4	149
Mycenae: Great Poros Wall	LH IIIB	AR11.11	81
Uluburun Assemblage	LH IIIA2-B	nd*	79
Athens: Veikou	LH IIIA	AT2.22	76
Mycenae: Prehistoric Cemetery	LH II	AR11.26	69.1
Lefkandi: Skoubris Cemetery	LH IIIC	EU2.28	62.6
Pylos: Palace	nd*	ME8.3	59.2

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